THE

SOUTHERN AGRICULTURIST.

OCTOBER, 1837.

PART I.

ORIGINAL COMMUNICATIONS.

Overseers.

Mr. Editor,—The qualifications of overseers have not been sufficiently examined. They coustitute a class of citizens on whose discretion, honesty, energy, and ability, measurably depend, the peace and prosperity of the State. They not only have to teach the slave subordination, but in doing this, they are compelled to regard his comfort, his health and his life. They have to teach him obedience at every hazard, while they estimate the value of his existence to his master. Should he falter in asserting his command, or wink at improprieties, his hands will in a short time neglect their work and fly his rule. No citizen in the State holds so perilous a trust. Let the overseer be dishonest and he will soon league in theft and robbery with bondsmen. Let him be inattentive, indolent, or thoughtless, and the best disposed negro on the plantation will adopt the same vices. Let him buy spirits at the shop, and a fellow will be often taken out of the field to send there, who will after a while, drink more than the overseer. Let him ride work-horses in the day time, and the negroes will ride them at night. Let him carouse and entertain his neighbors out of his employer's "meat house," then will the negroes supply their "cronies," out of "the crib." Should he be inattentive to his person and his dress, we will see the negroes careless of theirs—like overseer like man!

How important then is it, Mr. Editor, for planters to look into the qualifications of an overseer before he is employed. He should be of good moral character—able to read and write—honest—humane and observant. The smallest indication of unfaithfulness should result in his immediate discharge. He should not be retained one moment after he has deceived—he can no longer be relied on—he will become the accomplice of those under him, to conceal his impositions on the master. One half of the misfortunes of the planter arise from the conspiracies formed between his overseer and slaves—in this way is he cheated, deceived and ruined!

The Legislature would be doing the State a service, to make some provision for the education of overseers.—Let our free schools in the country be labor schools, where each scholar may learn how to cultivate the soil, and understand the disposition and duties of those operatives, over whom he may one day preside. Let him be taught the nature of our institutions—the energy requisite to preserve them—the art indispensable in managing negroes to the best advantage; and lastly a fine moral feeling that will dignify his condition and make him proud of it. Let him be so instructed, that he shall be considered a part of the political economy of the State—a citizen clothed with a high trust—a gentleman of humane feelings, decision and honor. This is a hint which I trust some of your correspondents will enlarge upon. Many parts of the lower country have been abandoned because *responsible* overseers cannot be procured, and the sooner we turn our efforts to the remedy the better for the condition of our slaves and our noble State. Why should a lawyer, a doctor or an apothecary, be licensed in their callings, and our overseers, who ought to combine in some respects, a knowledge of all these professions, be allowed to manage a class whose dispositions may be poisoned—whose bodies may be diseased and minds ill directed by criminal arts or neglect of duty? Dignify the employment of an overseer, and you shall find the best young men of our country devoting themselves to it. Make them the associates of their employers, and you shall discover with what frankness and delight they will identify themselves with the interests of their principals. Give them character, by intercourse—energy, by encouragement—pride, by education, and you shall see a

change over the agricultural interests of the State. They shall then be our safety—our swords in peril—our quellers of sudden treason or plantation riot. We will look to them as the *immediate* guardians of our peace, when the withering malaria of the low lands drives us from our plantations. P.

Bone Manure.

Mr. Editor,—You could not, it appears to me, render a greater service to the agriculture of your country than by collecting and presenting in one condensed view, the results of the various experiments made in England and France on the turnip and wheat crops of those kingdoms by the use of pulverized bones. The effect has been wonderful. The product of the soil has been doubled, and I believe in many instances quadrupled by the use of that manure, and that too in quantities not exceeding ten or twelve bushels to the acre. England, that wise and great agricultural nation, has applied the bones of her gallant soldiers, who fell at Waterloo to the support of her population, thus making the patriot soldier contribute in life and in death to his country's good. Much information on this subject may be found in the English periodicals, and the Farmers' Register published in Virginia. I have no doubt, sir, but it would be a profitable investment of capital in this city to erect mills for grinding bones, thereby rendering a great service to the city by removing them from the streets and commons, where they remain for years bleaching in our summer sun.

A FARMER.

The value of an article may be judged of by the demand.

Farmers' Magazine, (Loudon,) for May.

"*Bone Dust.*—Upwards of ten thousand bushels of 'bone dust were sold at Maduff, Inverneshire, on Monday 'se'night, many people having come upwards of thirty 'miles for it. It is supposed that there could not have 'been fewer than two hundred carts in town, and a 'greater bustle was never witnessed by the oldest in-'habitant."

Remarks by the Editor.

We are pleased that our esteemed correspondent has called public attention to the subject of bone manure. In this country, where the artificial means of living are not so much in requisition, as in those with a denser population than ours, we very often fail to put things to their fair use, or cast them entirely from us. What in England, pinching necessity would esteem an article of commercial value, is rarely heeded in this land of abundance and vast extent. Bones, for instance, have always been gathered abroad for many purposes—for making toys—knife-handles—milk glasses—porcelains—volatile salts—empyromatic oils—phosphorous—glue—for absorbing the sulphur of ores, for refining gold and silver—for making cast iron maleable; and though last mentioned, not the less important, for manuring. Until 1800, the properties of bones as a manure were little known.—They were then introduced into Lincolnshire and Yorkshire, England, by a bone merchant at Hull; and the consequence was, that the use of this manure raised wild unenclosed sheep land, *from two shillings and sixpence* TO TWENTY SHILLINGS AN ACRE! In a very short time, every part of the world was sent to, and large importations of bones were afterwards made—first from the field of Waterloo, and since the prohibitory acts of France and Belgium, from the plains of South America, in which for more than a century, the inhabitants have been killing cattle simply for their hides and tallow. Mills to grind them have been established in England; and we read of one lately put up in Maine or Ohio. We have it not in our power, at this time, to say any thing of bone-manure as used in France, but, can present to our correspondent an extract from the proceedings of 'the Doncaster Agricultural Association,' which we think will give him the information he requires. This Society appointed a committed in 1828, to make inquiries and report the result of them, on the use of bones as a manure, and they came to these conclusions.

1st. That on *dry sand, lime stone, chalk, light loams, and peat*, bones form a highly valuable manure; they may be laid on grass with great good effect, and on arable lands;

they may be laid on *fallow for turnips*, or *used for any of the subsequent crops.*

2d. That the best method of using them, when broad-cast, is previously to mix them up with earth, dung, or other manures, and let them lie to ferment.

3d. That if used alone, they may be either drilled with the seed, or sown broad-cast.

4th. That bones, that have *undergone the process of fermentation*, are decidedly superior to those, which have not done so.

5th. That the quantity should be about 25 bushels of dust, or 40 bushels coarse, increasing the quantity, if the land be impoverished.

6th. That upon clays and heavy loams, it does not yet appear that bones will answer.

London says, the quantity at present laid on is 12 bushels per acre drilled in, in the form of dust, with turnip seed—the turnips are fed off with sheep, and succeeded by a corn crop, and by two crops of grass. He says, moreover, that bone dust is not beneficial on *wet retentive soils*, as continued moisture prevents decomposition, but in all descriptions of dry soils it never fails of success.

The following is from the Canterbury Journal, which may throw additional light on the subject.

"*Bone Manure.*—As some of your readers may be desirous personally, to test the efficacy of Bone Manure, and yet be hindered by not being provided with the requisite drill, I have thrown a few hints together—the result of my own experience, and of information derived from good practical men—which may tend to encourage them in proving the utility of this valuable manure.

Bone manure should be placed within about two inches of the surface; and owing to the small quantity used per acre, the seed should be brought as near to it as possible, without immediate contact, which is better to avoid. There is, of course, no mode so eligible to effect this, as a drill, working clean and well, and depositing, from separate hoppers, the dust and the seed: but experience has proved, that a result closely approximating to this, may be obtained by very simple means.

The soil being first reduced to its proper state for the reception of the turnip crop, in lieu of a last ploughing, let the land be laid up in banks; the bone manure to be

cast on the land by broadcasts, followed by the roller, which will of course, crumble in sufficient earth to cover the manure, without by any means, obliterating the furrow: then run a single chep-drill, with the turnip-seed in the furrow, and cover the whole with a light harrow.

"Some recommend depositing the bone with a shake box; and one farmer, of much experience in the use of bone manure, recommended me simply to sow dust and seed broadcast, and then cover the seeds, and lay the whole into furrow by the operation of the plough afterwards: but whenever it is intended to use bones extensively, nothing is so well as to have a proper drill for the purpose, which will repay its first cost again and again. My observations, therefore, are intended for those only, who wish to make a first trial, and are unprovided with more efficacious means.

"The value of an article can always be found by its extended use: and if we take this as our criterion, I know not where we can find any article, the use of which has become so extensive, or that has so increased in price, within the last twenty years. Before that time, bones were comparatively valueless; being used only in the manufacture of porcelain, smelling salts, ivory black, &c., and brought only a trifling price per ton. They are now imported from all quarters; in many places, prohibitions and duties are levied to prevent their export; (see France and Belgium:) and they obtain about four times the price they did formerly; and yet, at the enhanced value, the use and manufacture of bone manure have increased, and continue to increase in all quarters.

"Its price at present, in the north, where its use is chiefly known, is, I believe, twenty-six shillings per quarter, the fine; and twenty-three shillings the coarse: and it is still the cheapest manure for turnips that can be found, as it bears mixing, in moderate proportions, with good vegetable mold, denshan ashes, soot, fine cinders, &c. Care should however be taken, that this admixture is not already done to your hand; for which your best, and indeed, only security, is the respectability of the merchant.

"To this cause is frequently to be attributed the cases of failure we sometimes meet with, although this again may be caused by the soil not being suitable, putting the manure too deep, or uncongenial seasons.

"Frequently bones are used too sparingly, to allow us

to expect to see much of their effects after the first year; but even sixteen bushels per acre have been evident not only in the turnip, but as well in the barley, and seeds succeeding; and if the price did not prevent the application in large quantities, as was the case in the first introduction of this manure, (forty and fifty bushels per acre and upwards) we should perceive a lasting benefit derived to the land from a liberal use of this the most lasting manure known."

Our correspondent thinks it would be a profitable investment of capital, to establish a mill to grind bones. To the farmers of this State we think it would be a great benefit. We are under the impression, that bones thrown away in the city of Charleston, and in other parts of the State, like rags, would be collected in large quantities, should there be a demand for them. The bone-breaking machine is by no means costly—a very small capital would be required to erect one. The parts are simple, and the power not expensive. That our readers may know how far it would be available to put up a bone machine, we will conclude by presenting a description of one, taken from Loudon's Encyclopœdia of Agriculture.

"The bone-breaking machine consists of two rollers grooved and indented, and with pinions on their ends, by which they may be moved either by animals, water, or steam power. The surfaces of the rollers are filled with indentations and strong teeth, which penetrate and break the bones to pieces. This is accomplished by employing separate cast-iron wheels, placed side by side upon an axis, to compose the rollers; the wheels have coarse teeth similar to those of a saw or rachet wheel; each wheel of the lower roller is an inch thick; and they are placed at distances of an inch and a half asunder, having circles of hard wood or iron placed between them, which are two inches less in diameter. The bones should be supplied rather gradually to the machine at first, to avoid choking it, and the rollers should then be adjusted to a considerable distance asunder; but when the bones have only passed through in this way, the rollers are screwed closer by screws placed for that purpose, and the fragments ground a second time. The pinions must have deep cogs to enable them to take deep hold of each other, when the rollers are set only half an inch distant to grind

fine, and without the cogs being liable to slip when the centres are separated so far as to leave a space of one inch or one inch and a quarter, between the rollers, for the passage of the large bones the first time. The rollers will act most effectually, if the different wheels are fixed upon their axles, in such a position that the teeth will not correspond or form lines parallel to the axles, and then, no piece of bone can escape without being broken by some of the teeth. The bones which have passed through the rollers, slide down an inclined board, and collect at the bottom in a large heap. When all the stock of bones are thus coarsely broken, a laborer takes them up in a shovel, and throws them again to the hopper to be ground a second time."

Blind Ditches and Wells.

Mr. Editor,—An admirable plan of draining in the West is after the French fashion, by which, whole fields can be worked with the plough, without the obstacles arising from open ditches. Below culture-mark, a ditch is dug with the plough, hoe and spade, and 'eased off' according to the declination required. Two pine saplings, or cypress poles, of equal length and similar thickness, are then laid about four inches apart in the ditch, parallel to one another: upon these two saplings is laid another of the same length, and of thickness sufficient not to fall too deep between them, and obstruct the passage of water—the larger the vent the better. The whole is then covered with pine-trash, and if that cannot be procured, any trash difficult of decomposition in water; then the earth is thrown in this, and the ditch filled up. The consequence will be this—the water finding its level from the surface of, and the circumjacent soil, perculates through the pine trash into the drain, and is carried off at the mouth of the drain into a main ditch. In this way, the coldest and sourest lands have been reclaimed and sweetened; and there can be no interruption to the working of the plough, inasmuch as the drain is below plough mark. These drains may be made as deep as is deemed requisite, with the largest pines, and of any length, if

some care be had in packing the pine trash, and jamming the ends of the saplings close together. I have heard they will last for a century—that is, pine or cypress. In fact any other kind of wood would do nearly as well, for woods always in fresh water and not exposed to the atmosphere, take a long time to decay.

What excellent use could be made of the blind ditches in the flat lands of our State. How many acres now unavailable, would they not reclaim. They may be made serviceable in every sort of land, whether rolling, level or broken, at a comparative expense of little consideration, when it is remembered, how often open ditches are cleaned out to let off the water. Nor are we required to take as much pains in digging these ditches, as we do with others,—get the declination and space for laying down the saplings, and packing the trash, and you may not heed nice work or the figure of the sides. On the fine cotton lands not sufficiently high, I would respectfully suggest their value—they could be used even on sandy lands, with good effects, so as to guard against a season of continued rains.

This plan of ditching is common in the West. It has its opponents, yet, a notion has occurred to me, which, when understood, will doubtless, at once, confirm their importance. Some contend, that they do very well to keep the land sweet, and carry off a light fall of rain, but, are inefficient in broken fields, where the water from the surface concentrates on the lowest parts. To obviate this, permit me, Mr. Editor, to propose the digging of blind wells. Suppose, sir, one is cultivating a field, elevated on the boundaries and declining to the centre, or to any other part, where the water concentrates—to drain off, not only the under, but the over surface run of water from this centre, I would dig a well, say four feet deep, (I am not particular) the sides of which should be made of two inch, or one inch and a half plank, here and there bored with a three quarter inch auger—the plank to be nailed outside of the four posts, that should be let into the well to constitute its frame work. *Into each side of this there should be an opening for the mouth of a blind ditch, two feet or more from the top of the well.* Around the sides of the well should be packed pine trash—the top of it should be on a level with the earth, or an inch below, covered with plank, and bored as aforesaid, in such a manner, that

the top could be taken off at pleasure. The water above the surface and below it, would run from every part of the field to this well; and should it bear sand along with it, the sand from its specific gravity, *will fall below the mouths of the blind ditches in the bottom of the well*, and the water would be carried off. The sand at the bottom could be taken out whenever necessary, and to obstruct the ingress of trash, straws, &c., a wire covering, at a trifling expense, could be nailed over the mouth of the ditch. That fall of water, which would seem to bear along with it sand in quantities so rapidly as to produce the choking up of the ditches, will accumulate in the well in bulk sufficient to force through the sand along with the flow of water to the outlets of the ditches. However, the choking of the ditches need not be feared, the incessant run of water at all seasons will keep them clean.

These wells should not be covered, if the plough be not used; if it be used, they should be made strong enough, to allow a horse to walk on them, without endangering his limbs.

In this way, Mr. Editor, I flatter myself the whole field could be drained and worked with the plough. I have supposed a case—the judgment of the planter will tell him under what peculiar circumstances of location of soil how far he should vary from the plans I have adopted in this imaginary field. The plan of making the blind ditch and well, may be estimated without referring its utility to the localities of any particular description of land—and should it serve your readers, or any one of them, I shall be amply repaid for the time consumed in the composition of this article. Yours, with great respect, Sir,

C.

Remarks by the Editor.

Our correspondent is entitled to the merit of originality for his suggestion of blind wells—the ditches of which he writes, we have no doubt, could be turned to account by our long cotton planters, inasmuch as, their delicate staple calls for the driest soils. How far they would succeed in carrying off the water in low lands, more especially if level, we are yet incredulous. For broken lands they might do very well—but in the low country, where the fine cotton is cultivated with the hoe, we should pre-

fer the open ditches. The blind might be used with great good effect between the open quarter ditches, to keep the soil dry; indeed we are pleased with this notion, and recommend its consideration to those interested. Should this plan of the blind ditch and well be sufficient to carry off the surface water, as our correspondent says, it would enhance the price of those fields which are cultivated with the plough—particularly in sandy lands, interspersed with low bottoms, it would be the most effectual way of draining them, for open ditches in sand are too liable to cave in and choke after the lightest rains, or from the power of the winds. We recommend the whole article to the grave consideration of our readers.

Observations in reply to an "Upper Country Recluse," with an account of an extraordinary production of Grapes and Wine.

TO THE EDITOR OF THE SOUTHERN AGRICULTURIST.

Columbia, S. C. Sept. 9th, 1837.

Dear Sir,—You guessed rightly when you supposed I should be inclined to make a few observations on the communication of an "Upper Country Recluse," in one of your last numbers. I was so inclined, and would have done so at the time, had I not been prevented by indisposition.

The errors of the "Upper Country Recluse" were but few; for one of them—the leaving only one leading shoot for the purpose of gaining height as soon as possible—I do not look upon as an error, although two would have been safer; but this shoot should have been secured beyond the possibility of its being destroyed. It is generally better, however, before a vine is much extended, to wait till it is three or four years old, keeping as much of the growth, the first and second year, as is practicable. The effect of this is to strengthen the roots, and enable them thereafter to assist the efforts of the cultivators in extending the vine either vertically or horizontally, according to his plan. This gentlemen, I suspect, does not remember clearly what he has read on the subject, when he says,

"I had read that each eye would produce me a bunch of grapes," &c., or I misunderstood his meaning. Each eye or bud left at the winter pruning, produces one shoot, and each shoot, two, three, and even four bunches of grapes. As to the fear of a vine's bearing more grapes than necessary, or that it can bring to perfection, I look upon this as nature's business, and never interfere with it, except in making experiments, in which I never have found that the suppressing a part of the bunches of grapes, either as soon as they appear or afterwards, was attended with any benefit.

I must say that I come to a different conclusion from that of the Recluse, as to nature's object in giving great luxuriance to the vines. It appears to me that she intends thereby to form large plants of them, and that the business of the cultivator is to direct nature's operations towards the attaining of his own views; but without a direct opposition to her efforts. Young vines, in a thrifty condition, grow with astonishing luxuriance, particularly from the age of five or six years to ten or twelve. I have frequently seen, during this period, shoots that would extend thirty or forty feet in length, with a proportionate thickness. I think it more prudent, at the winter pruning, to leave such shoots several feet long, so as not to oppose nature's evident object too violently, and I think I never had cause to repent my pursuit of this plan.

As to *pinching* off, or cutting off the shoots, I must say a few words. I must begin by making the necessary distinction between the main ones, from those usually called "side shoots," "suckers," "gourmands," and "robbers." As they grow in the axils of the leaves, between the stem and the leaf, I have adopted Bosc's name *(entre feuilles)* for them, and call them "interleaves." These, all writers on the subject recommend to be *pinched off* as soon as they appear; but the practice of most cultivators is somewhat different, for many of them only break them off, when they have attained a considerable length, and then leave one or two leaves on them. On vines growing most luxuriantly, this last may be the better practice; for I have sometimes observed that the suppressing them altogether on very vigorous shoots, has caused the bud, which they seem intended to protect, to grow and bear fruit. This effect is almost always produced by shortening the long bearing shoots, which is a

very bad practice, and which I suspect had been the case with the vines which the Recluse mentions thus: "Guess my surprise, Mr. Editor, on now observing as the fruit came out, that instead of a bunch of grapes at each eye, a new fruit stem put out there, on which there were sometimes three, sometimes four, and I verily believe sometimes five bunches." I may have misunderstood the writer; but this is exactly the effect of shortening the bearing or other vigorous shoots, by which means, a second crop of grapes is obtained, which, however, seldom come to perfect maturity. In order to perceive the nature of the injury done by this operation, we must keep in mind that the buds that are at the junction of the leaves with the stem, are those intended by nature to produce the following growth of bearing shoots. If you force them to push by cutting off the end of the shoot, there will be no bud left for the following year's crop, and the vine will thereby be materially injured. This shows also the impropriety of pulling off the leaves, as inexperienced people recommend; for the leaves protect and support the bud at the foot of them, and by breaking or cutting them off, you deprive these buds, which are intended for the following year's growth, of the nourishment necessary to enable them to perform their intended functions.

I think 12 feet is inconveniently high for an arbour for vines, and find 8 or 8½ feet much more convenient, and sufficiently high to allow a free circulation of air below, particularly as I do not suffer any of the grown vines to have any thing growing below the top of the arbour, which is level on the top, and on which the vines are made to spread evenly, and are tied down.

Mr. Recluse's precaution of locking his garden gate and keeping the key in his pocket, is very good. I hope that, to coincide with this, his fence is sufficiently high to keep off all two-footed thieves, except those that can fly. As for his having neglected to have his frame made at first full and complete, I consider it not as an error; for the vines do not need it for two or three years, and sometimes a longer time, during which they may be supported by poles. My practice is to put three poles to each strong vine, sinking them in the ground at some distance from the vine, forming thereby a triangle, in the middle of which is the vines. These poles are strongly tied together at the top with a willow twig, and the wind

cannot blow them down. These will last about three years, and when the frame or arbour is made, three years of its duration is gained.

I have thus, sir, candidly and fully given you my views of the "Upper Country Recluse," for his benefit, and that of others, if any such a thing can be gleaned from this letter of mine. I take the liberty of exhorting him and all others, to persevere in this most interesting culture, and assure them that my experience proves to me that it is as wholesome an exercise for the body, as it is most pleasantly exciting to the mind. I am at this very moment under the influence of these very benefits, for I have been for two weeks past busily engaged in cutting my grapes, and making wine, both at my farm and in my garden. I was much indisposed when I began, and would most probably have got sick, but for the great exertions and fatigue I unavoidably put upon myself, I had no time to think of sickness. In consequence of this, I have much improved in health.

Do pray, my dear sir, recommend my remedy to all the good people of the low country, particularly to those who are in the practice of spending their summers at the North among the abolitionists, with whom they leave all the money they can spare, and sometimes even a little more. Send them up the country to establish vineyards, and gain strength, vigor and health, together with wine, which they may warrant to be genuine. By way of encouragement, I must tell you that I have this very day terminated my vintage, except a few odd grapes, which I shall gather next week, which will add 50 or 60 gallons of wine to that already made. I made at my farm 750 gallons, and in my garden 528 gallons. This last is a most enormous crop; for the vines that produced that quantity are on one sixth part of an acre. This is, therefore, at the rate of 3168 gallons to the acre, which is perhaps a greater crop than ever was made any where; at least, I never have seen any account of any one, more than 2000 gallons, and that is exceedingly rare. I have moreover, reasons to believe that the wine will be of a very good quality. The produce of two of the vines in my garden is so great, that if I had not the most respectable witnesses of the fact, I should hesitate to name it. They produced 130 gallons of wine, and even more.

After this, and my paper being full, I have only to assure you that I am, very respectfully, Sir,

Your obed't. serv't.

N. HERBEMONT.

Short Cotton on the Low Lands.

I put it to the good sense of those planters, who have given up the culture of rice and now substitute the fine cotton, whether the following hints should not awaken the inquiry, with what propriety some other staple better adapted to their soils, could be selected, which would bring them higher profits from the investments of capital? We hope these remarks may not be considered intrusive. Once we had been a sojourner in a smiling portion of this State, which now seems a wilderness. The beautiful homesteads of the hospitable planters of that region, are fast disappearing; and fields which once teemed with golden harvests, are now mere water-wastes! How should this be? I repeat the question—how should this be? Grant, that the water courses have been stopped up, and that rice can no longer be cultivated successively. Grant that our Legislature did refuse to make an appropriation for opening a canal through which the rice fields could be drained—grant that fine cotton is here planted—let us ask; is this the culture which suits flat lands or hammocs, surrounded by flooded fields? Are low lands productive of fine cotton? Does it not love high soils, even sand-hills? Has not this opinion grown to a proverb? Why then should the owners of flat lands continue to cultivate a staple, the crop of which will rarely, if ever, be abundant, from localities, from permanent dampness, coldness and rot? Why not substitute a hardier plant, that would yield four times as much to the acre in bulk, and more in profit, because of its certain availment? What are the so much valued hammocs of Florida and the West, but similar to the high lands of St. —— and St. ———? Is there any difference? Is not one soil as strong as the other? Is not the growth similar? Why then should one be more valuable than the other? The

answer is—because in Florida they *plant on similar lands, short, not long cotton!*

We are under the strongest belief, that the lands in the two Parishes we have mentioned, are equal to any in the State, and under proper management, would constitute a mine of wealth to an enterprising planter. How, it may be asked? *Not by planting six acres to the hand*—not by scraping all day with the hoe—not by drowning a delicate plant in water, or chilling it in cold damps—no—but by resorting to the plough, and planting *between fifteen and twenty acres of short cotton to the hand!* Some may laugh at this suggestion. But, we would inquire, how much do the swamp planters on the rivers and the middle country plant to the hand? From 15 to 25 acres. How much is planted to the hand in every part of the West? Not less than 20 acres. Are not their low lands—their swamps—ploughed with as much difficulty as the high lands of St. —— and St. ——— ? Oh, but my friend tells me—"the plough will not do for our lands; they are too stiff." Are not the swamp lands of the middle country stiffer? What then? Let two horses be put in a dagoa plough, and we shall see the result. Let the land be broken up early in the winter, and the frost fall upon it, and granulate it; and there will be no difficulty in keeping down the grass, and ploughing it at all seasons. The truth is, many of us have no conception of the power of the plough. We snatch up opinions without trial, so that sometimes, the mere random assertion of one person affects a whole neighborhood, and grows to a common error. All flat lands to be rendered available, should be broken up deep early in the winter: let them be ever so stiff, this lightens the working of the crop. The oftener they are worked, the more friable they will become; and they improve in fertility every time they are manured. Even the planters of sandy lands are beginning to plough deep, for they have discovered that it improves the soil, the growth of one year by this process being thrown under to decompose, is brought to the surface by the next year's breaking up,—a food for whatever plant one may cultivate.

We are aware, that, there are many plantations in that part of the State to which we have alluded, on which rice and fine cotton yield handsomely; but this is not the case every where, else why should we meet with so many waste lands?

We would tell those, who contemplate emigrating from this State, that our low country lands can be purchased cheap, which will yield, with the same industry, as much as the lands of the West, and we can prove, are usually as healthy—that on these lands are fine dwellings and out-houses, with *immense facilities* of manuring—noble ranges for cattle and hogs—game in abundance—and a climate for the culture of short cotton, *two weeks in advance of the middle and up country*—that there are rivers at hand—landings, and better roads than can be found in all Alabama—that the great Southern Rail Road is at hand, and Summerville—a summer residence, whose climate is balmy, and society of the most finished kind—that the low lands or swamps abound in marst for hogs, and afford a range for cattle, which does away the necessity of feeding them the whole year. A country such as this, should arrest the attention of emigrants! One half of the industry exhibited at the West, would guaranty the accumulation of fortune in this region. There is not an acre of these lands which would not yield 700 lbs. seed cotton to the acre; nay, we believe we are below the mark. We will, however, suppose the quantity made to the acre should be a half bale; with the plough fifteen acres of cotton and five of corn could be planted—or say ten of cotton and ten of corn. This would be almost a certain yield of five bales to the hand, of 300 lbs. each, which at 10 cts. per lb. would give $150 to the hand. Let planters boast as they may, one hundred and fifty dollars is a handsome profit, with a corn crop, bacon made and stock in order.

We would advise the culture of cotton after the method in Georgia—that is, in checks—a field is broken up early in the winter with a two horse plough, and laid off at the distance of three feet, both ways—in each check, if the soil be very strong, is left one stalk—if not very strong, two stalks—fifty pods of cotton to each stalk, (one left) will give 2000 lbs. of seed cotton to the acre—more than a bale and a half, or say one bale. Cotton thus planted, on lands not too flat, can be attended with the plough, by using first the rake twice, then the skimmer afterwards—the last ploughing calls for the shovel, Dagon or Free-born plough to bed the cotton. At any time should it be deemed advisable to hill with the hoe, it can be done with great facility, since three acres of corn is the task

called for in hilling and thinning corn. We may observe, that cotton planted in this way, is like corn ploughed both ways; and the ploughing must have been very slovenly indeed, should the hoe be required. The skimmer is sufficient for any purpose, except bedding or hilling, when the crop is laid aside. The advantages of planting cotton in the check may be learned by perusing Dr. Harden's Essay on Rot, republished in the June number of the Southern Agriculturist.

Should the land be too low, let the cotton be planted on beds made with the plough. In some parts of the State, beds always are made with the plough—the drill is made with the plough stock—the seed are dropped with the hand, covered with the plough-board; and afterwards, the hoe is assisted by the plough, by means of which the task of each hoe-hand is always one acre, in every kind of soil, flat, high, clay or sand.

P.

Fuel and Timber.

Mr. Editor,—The remarks of your correspondent, Charleston, in the last number of the Agriculturist, on planting Pride of India trees, for fire wood, have caused me to turn the subject over in my mind. That we will be dependent on foreign markets for our fuel ere long, is an assertion not without some foundation of truth; and unless we can mark out some other way of obtaining this great and essential comfort during winter, the misery of the poor will have become fixed and poignant. There is wood enough to supply Charleston for a half century, at prices moderate and *suited to the ability of all*, if it could be brought with less expense to the landings on the water courses. Its high price arises from the difficulty of hauling it, and its distance from the rivers. Now a plan has been presented to me, in adopting which, this evil may be somewhat abated. Travelling on the rail-road often last winter, I was made familiar with the method the company pursue of conveying dirt to make their embankments. Let gentlemen adopt the same or a similar plan —let them lay their rails at equal distances, and purchase one or two of the dirt cars from the Rail Road Company,

or cause them to be made, and I have no doubt the whole construction and cost of conveyance would be infinitely cheaper than it is now. Nigh the city, scantling may be used, and a rail road of any extent built, more especially if the wood land stands at the head of a piece of country inclining to the landing, *which is ever the case either on one side or the other of all rivers.* A plan of conveyance similar to this, is adopted at nearly all the coal mines in the United States and England. The cost compared with the benefit, would be comparatively a trifle—one may easily calculate it when he knows for what sum one thousand feet of scantling can be bought, and how many yards of rail, parallel to each other, these one thousand feet, will turn out. I leave it to the ingenuity of him who undertakes it, to construct his own rail—I am not carpenter enough to use language sufficiently intelligible to explain the plan that takes my fancy. I would let the rails into cross pieces of timber at every ten feet distance, there to be wedged—I would use no iron except to connect the ends of the scantling, and in such a way that the scantling could be taken up at pleasure, without having to tear out nails, &c. For I would calculate that such a rail would last a long time, say ten years, and in the mean time could be taken up and laid in any direction, to correspond with the spot where wood may be cut.

I would also, Mr. Editor, recommend this kind of conveyance to the hewers of timber—this article of trade is diminishing every year, in quantity and *quality*—not because, like the white pine at the North, it is vanishing from us, but because nearly all of it has been cut down on the sides of the rivers. The plan of this sort of rail-road would enable them to select the finest pines, and convey them in one half of the time, and at one half of the expense, arising from the present way of hauling them. In fact, nothing could be cheaper. Commence at the fartherest end from the river—hew three sides of a pine tree, which would be not less than 125 feet a day to each hand—let these be used for rails. There will be no necessity to haul the rails—trees may be cut down for the purpose whenever wanted—at all events, this remark will be borne out in many parts of the land through which the rail-road will run.

I intended saying something about connecting the Ashley with the Edisto, but as my letter sheet is nearly filled,

and as it is too important a subject to the city of Charleston, and the country people, to handle without the proper information required, I will leave it for one of your forthcoming numbers. For the present I will say, that the connection of these rivers by a canal, would conduct to Charleston materials of trade far above the belief of some, and among these materials, wood and timber would not be the least valuable.

AIKIN.

Rot in Cotton.

Mr. Editor,—Dr. Harden, in his essay on rot in cotton, traces this disease to the seed. He is under the impression, derived from what he supposes many well authenticated facts—that the seed are impaired or diseased by the method of putting them up in bulk. He advises that they should be kept cool and dry. His essay is very interesting, and contains a body of evidence that would lead me to the same conclusions—but I am still in doubt. I believe that cotton seed injured in the bulk, so as to affect their growth, would never sprout—that the only great disadvantage of putting them up in bulk, is the loss of many of them from decay. However, sir, as the planters of long cotton are very particular in preserving their seed, will some of them tell me whether their experience confirms the theory of Dr. Harden. They, of all persons, can speak knowingly of this matter, and I hope they will do so, for the benefit of the cultivators of short cotton at least. I would like to know—1. whether cotton seed, after ginning, is immediately housed in bulk? 2. whether before or after hard frost? 3. whether sunned before housing? 4. if in bulk, how long before selected, that is if selected at all? And lastly, all information, which would either confirm or disapprove this novel theory of rot. To these questions, the attention of your able correspondents is earnestly called.

SHORT COTTON.

Acclimation of Tropical Plants.

Charleston, 24th September, 1837.

To the Editor of the Southern Agriculturist.

SIR,—The accompanying Report on Specimens of foliaceous fibres brought from South-America by Dr. H. Perrine, and the acclimation of Tropical Plants, was adopted by the South-Carolina Agricultural Society, and ordered for publication in the Southern Agriculturist. By resolve, also, the aid of our Representative in Congress, the Hon. H. S. Legare, was solicited to effect Dr. Perrine's laudable and patriotic undertaking. I have the honor to be

Your Ob't. Serv't.

ROB'T. WM. ROPER,

Cor. Sec'ry of the S. C. Agricultural Society.

Report to the South-Carolina Agricultural Society, on Dr. Perrine's scheme of introducing Tropical Plants into the United States.

The Committee, to whom was referred the specimens of foliaceous fibres, brought from South-America by our intelligent and enterprising countryman, Dr. H. Perrine, and the subject of the acclimation of Tropical Plants, respectfully report, That after an attentive review of the documents in his possession, and a careful examination of the specimens presented, they attained the conclusion, that he must have sacrificed much time, a large amount of professional emolument, and endured considerable labor and annoyance in procuring and forwarding the plants, hereafter described, which, should they be acclimated, and found to flourish in any part of our country, will be of distinguished use in one of the most useful departments of human industry, viz., in nautical affairs. The jealousy of the South Americans is such, that they not only withhold all aid from foreigners, but actually prohibit the transportation of any of the products of their soil and climate. In consequence whereof, Dr. Perrine was compelled to avail himself of the gratitude of the Indians, whose families had received his medical aid gratuitously, to procure and to remove the plants, upon whose habitually suspicious and jealous minds, no pecuniary remuneration would have had any persuasive efficacy. The specimens exhibited were the following: "*Agave Sisaland*,"

commonly called the "Seasal Hemp." Of this, there are two varieties, which flourish in stony or sandy sterile soils. Its fibres are remarkably strong, and make the most beautiful, and apparently the strongest rope or cable. It is asserted that they hold the South American vessels, during the peculiarly violent hurricanes of that climate, when European ships, moored with iron chain cables, and those of Russian Hemp, are continually parting from the latter, and drifting at the will of the tempest. It is admitted by our own naval officers, that it makes the finest rope for running rigging. It must also make fine thread for sewing, and material for bags, and canvass work. The mode of preparation is very simple, requiring no rotting, &c., but only to have the green rhind scraped from the leaf, by a sharp cornered stick, resembling a three edged wooden sword, about 2½ feet in length, after which process, (which is a quick one,) the fibres are ready for use. The next specimen was the "*Bromelia Pita*," considered as a substitute, and that too of a superior character, for Flax. It propagates itself in a shady, sandy soil. The mode of preparation similar to that described. The prospect of these plants becoming acclimated, upon a fair experiment, is strengthened by the fact, that the *Agave Virginica*, similar, though inferior in character, is found as far North as the State from which it derives a part of its name. A striking merit recommendatory of the attempt to introduce and propagate these foliaceous fibres, is the adaptability and facility of their cultivation in the poorest and most sandy soil of Carolina and our southern section: in this respect resembling our own Palmetto, which also furnishes a fibre, that might be made useful, though of an inferior quality. Of the value of the yield of these plants, a statement was exhibited of an investment of $10,000, the precise result of which, we do not recollect, but are fully persuaded, that at the end of three years, the nett profit was unusually great. In addition to the above, Dr. Perrine has for many years devoted his zeal and talents to the forwarding to Southern Florida, of many species of valuable vegetables, which yield farinaceous roots, delicious fruits, healthy beverages, precious oils, permanent colors, &c., of whose fate, he cannot precisely tell, owing to the disturbed state of the country.

Your committee cannot, in conclusion, do otherwise than recommend Dr. Perrine's enlightened efforts to the favorable construction and support of his countrymen, and especially to the patronage and fostering aid of Congress—believing his aim to be the offspring of that honorable ambition, which delights

> "To scatter plenty o'er a smiling land,
> And read its history in a nation's eyes."

Clearing Land.

Mr. Editor,—There are many ways of clearing ground in the middle country, which it might be well to comment on. I look upon this to be a maxim, that nature lives upon itself; or in other words, organic life draws its being from, or subsists on, the decay of those bodies, in which life exists, or did exist. The child takes nourishment from the bosom of its mother: the vegetable from decomposed or decomposing vegetables. And if this be true—and there is some foundation for it—whatever vegetable matter appears on the earth should never be wasted, but preserved as a pabulum for other vegetables. Nothing in the shape of a vegetable should be destroyed; it should be kept and returned to the earth in such modified form, as the experience of the planter determines will enrich the soil. Now let me apply this principle, and see whether some of the planters of this State do not err most egregiously when they burn up all the trash on their new grounds. Would it not be advisable, instead of consuming small trees, leaves and roots, to cart them out of the field, or even pile them in the field? Would not more time be gained by this course? See how long our people are burning—first the grubbed trees are piled, then the leaves raked and burnt. I am confident, in one half of the time of burning, all of them could be carted out of the field. I have tried it, and know it. Let a negro be sent to push up *one pile only*, and he will make a day's work of it. Besides the loss of the vegetable matter, the time of burning it is not enough dwelt on. Did we sell the ashes, or make potash out of it, as some of the Northern farmers do to pay for the expense of clearing, it would be another thing; but whole forests are consumed, and not

even fire wood is cared for with some. This is a waste, Mr. Editor, I would almost call criminal; one that should be stopped. There is another practice in some parts of the country—in March the woods are set on fire for a cattle range, and leaves, the only permanent source of manure we have, are thus consumed; and often, very often, fences are burnt up. In some parts, this occurs every year, and when the incendiary is called for—"accident," or "I don't know," is the delinquent. Sir, there are laws against burning the woods, which every good citizen should enforce—it is the solemn duty of every planter to do so—to urge it upon the solicitors of this State. It is almost a species of assassination, when we come to look at the circumstances attending the act. The man who does it, knows its heineousness, because he does it in the dark, or in some secret place, and conceals the act. He will never tell that he did it, unless caught, or it be traced to his *own land;* and then he will say, "the fire got away, or it was an accident, or that some designing person, to injure him, did it." Such barbarism, such callousness to the rights and the feelings of his neighbor, should be visited by the slap of the law—aye, by stripes, Sir!

It is not generally known, Sir, that the absence of vegetable matter in the soil is the cause of rust, and this disease can always be avoided by bedding on leaves, &c. partially or totally decomposed. This is and has been proved—because, 1st, worn out fields are always liable to rust during any season; and 2d, because the bald prairies of the West, after the third years' culture, rust the cotton, from the exhaustion of vegetable mold. This fact of itself shows how valuable all vegetable matter is. Even rotten wood, trampled in the stables and cow pens, and combined with animal manure, benefits either corn or cotton. I would then respectfully suggest, that instead of burning our new ground, we should cart all the vegetable matter from it, or even pile it in the field to decay, and from these piles supply our stables and cow pens. By this method we would gain the time of one raking, and husband our leaves.

LEXINGTON.

PART II.

SELECTIONS.

Experiments in Feeding Cattle on different descriptions of Food. By Mr. Robt. Stephenson, Whitelaw, Haddington.

[FROM THE QUARTERLY JOURNAL OF AGRICULTURE.]

The cattle selected for this experiment were oxen rising two years' old, and bred on the same farm. Their live-weights were ascertained at the beginning, during different periods, and at the end of the experiment. They were divided into three lots of six beasts each, and placed in open courts with sufficient sheds and stalls, and small mangers fitted up for corn and linseed cake. A correct account was kept of the weight of food consumed by each lot. Lot 1st were allowed linseed cake, bruised beans, and bruised oats, in addition to what turnips they could consume: and, for the last twenty-four days of the experiment, 20 lb. of potatoes per day were given to each beast. Lot 2d received the same allowance with the exception of linseed-cake; and, for the last twenty-four days they got only 10 lb. of potatoes, each beast, per day. And the 3d lot were fed on turnips alone. None of the lots were allowed hay. The objects of this experiment are, first: to compare cattle fed partly on linseed cake with those which had none; secondly, to compare those fed partly on corn with those which had none; and, thirdly, to compare those fed solely on turnips with those which had different sorts of food. From former trials we are inclined to believe that cattle consume food in proportion to their weights when nearly alike in condition. We therefore resolved, in this experiment, to divide the eighteen cattle, so as to confirm or refute this belief. They had been all kept in the same manner since they were calved, and were pretty much alike in condition, although varying considerably in weight. The six heaviest cattle, weighing in live-weight 486 imperial stones, were selected for lot first; the next six heaviest of 443 stones, constituted lot second; and the six lightest, made lot third, were 346¼ stones. These weights were ascertained on the 23d November, 1834, when the experiments began after the cattle had been in the court-yard from 20th September, 1834, and all fed on the same kind of food, namely, common white globe turnips. The white turnips given during the experiment were of good quality, raised with dung upon a rather stiff soil, and estimated about 20 tons per acre, their gravity on the 19th November, 1834, being 897.4 oz. per cubic foot. The Swedish turnips were also of good quality, grown on good clayey loam, 20 tons per acre by weight and measurement, their gravity being 1030 oz. per cubic foot on 19th November; but

they had lost weight for bulk considerably by the 17th March following, when the last were raised from the ground, being then only 976.9 oz. per cubic foot; The white turnips used before the experiment commenced on 23d November, 1834, were raised with bone manure, and rather inferior in quality, being only on 19th November. 774 oz. per cubic foot. With these preliminary observations, we will proceed to state the particulars of the experiment.

1. Food consumed by each beast of lot 1st—

	£	s	d
13 cwt. 1 qr. 16lb. white turnips from 22d November, to 3d December, 1834, ten days, being 150lb. per day at 3d. per cwt.	0	3	4
30 lb. bruised beans, for 10 days being 3 lb. per day at 13s. per boll, allowing 60 lb. to the bushel,	0	1	7½
40 lb. linseed-cake, for 10 days, being 4 lb. per day at ¾d. per lb. or £7 per ton,	0	2	6
25 cwt. 3 qr. 20 lb. Swedish turnips, from 3d December to 25th December, 1834, 22 days, being 132 lb. per day, at 4d per cwt.	0	8	7½
88 lb. linseed cake, for 22 days, 4 lb. per day, at ¾d per lb.	0	5	6
66 lb. bruised beans, for 22 days, being 3d per day.	0	3	7
69 cwt. 0 qrs. 21 lb. Swedish turnips, being 123 lb. per day for 63 days, from 25th December, 1834, to 26th February, 1835,	1	3	0¾
189 lb. bruised beans, for 63 days, being 3 lb. per day,	0	10	2½
126 lb. bruised oats, for 63 days, being 2 lb; per day, at 20s. per qr., say 42 lb, per bushel,	0	7	6
189 lb. linseed cake, for 36 days being 3 lb.* per day,	0	11	9¼
21 cwt. 2 qrs. 2 lb. Swedish turnips being 100 lb. per day, from 26th February to 22d March, 24 days,	0	7	2
480 lb. potatoes, for 24 days, being 20 lb. per day, at 6s. per boll of 4 cwt.	0	6	5
72 lb. bruised beans, for 24 days, being 3 lb. per day,	0	3	10¾
48 lb. oats, for 24 days, being 2 lb. per day,	0	2	10¼
72 lb. linseed cake, for 24 days, being 3 lb. per day,	0	4	6
Total cost of feeding one beast of lot 1st,	£5	2	7

2. Food consumed by each beast of lot 2d—

	£	s	d
14 cwts. 1 qr. 24 lb. turnips, being 162 lb. per day, for 10 days, at 3d. per cwt.	0	3	7½
30 lb. bruised beans, for 10 days, being 3 lb. per day,	0	1	7½
29 cwt. 1 qr. 24 lb. Swedish turnips, being 150 lb. per day for 22 days, at 4d. per cwt.	0	9	9¾
66 lb. bruised beans, for 22 days, being 3 lb. per day,	0	3	7
67 cwt. 2 qrs. Swedish turnips, being 120 lb. per day for 63 days,	1	2	6
189 lb. bruised beans, for 63 days, being 3 lb. per day	0	10	2½
126 lb. oats, for 63 days, being 2 lb. per day,	0	7	6
24 cwt. 2 qrs. 16 lb. Swedish turnips, being 115 lb. per day, for 24 days,	0	8	2½
240 lb. potatoes, for 24 days, being 10 lb. per day,	0	3	2½
72 lb. bruised beans, for 24 days, being 3 lb. per day,	0	3	10¾
48 lb. oats, for 24 days, being 2 lb. per day,	0	2	10¼
Total cost of feeding one beast of lot 2d.	£3	17	0

*It will be observed that the linseed cake has been reduced from 4 lb. to 3 lb. per day, because the cattle, on being allowed oats in addition to the beans, *would* not eat more than 3 lb. of linseed cake per day.

3. Food consumed by each beast of lot 3d—

11 cwt. 3 qrs. 14 lb. white turnips, being 113 lb. per day for 10 days, at 3d. per cwt.	£0	2	11½
22 cwt. 2 qrs. 10 lb. Swedish turnips, being 115 lb. per day for 22 days, at 4d. per cwt.	0	7	6¾
64 cwt. 2 qrs. 21 lb. Swedish turnips, being 115 lb. per day for 63 days,	1	1	8¾
19 cwt. 2 qrs 24 lb. Swedsh turnips, being 92 lb. per day for 24 days,	0	6	6¾
Total cost of feeding one beast of lot 3d,	£1	18	7¼

Abstract of Cost of Keep.

Lot 1st, 119 days, £5 2 7 = 6,0343 shillings per week.
Lot 2d, 119 days, 3 17 0 = 4.5294 shillings per week.
Lot 3d, 119 days, 1 18 7¼ = 2.2712 shillings per week.

Improvements in Live Weight

	Lot first.		Lot second.		Lot third.	
	Lvie weight in stones	Improvement in stoues	Live weight in stones	Improvement, in stones.	Live weight in stones.	Improvement, in stones.
Nov. 23 1834.	486	-	443	-	346¼	-
Dec. 25, "	520	34	469	26	354¼	8
Jan. 24, 1835,	554	34	499¼	30¼	375	20¾
Feb. 25, "	582	28	528	28¾	389	14
Mar. 23, "	594	12	544	16	395¼	6¼
Total improvement in seventeen weeks.		108		101		94

We have thus obtained data on which we can ascertain whether the foregoing methods of feeding of castle can be practised without loss.

We regret that we are unable to present the amount of the beef, tallow, and hides, of all the cattle in this experiment when killed, having only obtained a correct account of four of them, which were slaughtered by Mr. M. Hutchison, Leith. But as we have ascertained pretty accurately the dead weight of cattle, from a number of experiments on those of like condition and age, by multiplying the live weight by the decimal 571, we shall apply this rule to the live weights in the above table, in order to ascertain the quantity, and estimate the value, of the beef produced; and we shall add 6*d.* per stone to the beef, being its increased value by feeding at the end of the experiment. The tallow is about the eighth part of a hundred of the live weight, or that multiplied by 08 will give the nett weight of the tallow. The hide is about the fifth part of a hundred of the live weight, or that multiplied by 05 will give the nett weight of the hide; and the live weight multiplied by 28, will give the weight of the entrails and refuse.

Lot 1st, subjected to these rules, stands thus:

Improvement in live weight, 108 stones equal 61 stones, 10 lb. beef, at 6*s*. per stone.	£18	10	3¼
Increased value of the carcass of 339 stones, at 6*d*. per stone	8	9	6
Increase of value from feeding,	£26	18	9¼
Deduct cost of keep of each beast, £5: 2: 7 by 6,	30	15	6
Loss on feeding lot 1st,	£3	15	8¾

Being £12: 6: 0¾ per cent.

Lot 2d—Improvement of live weight, 101 stones, equal 57 stones, 10 lb. beef, at 6*s*. per stone,	£17	6	3¼
Increased value of carcass of 310 stones, at 6*d*. per stone.	7	15	0
Increase of value from feeding,	£25	1	3
Deduct cost of keep of each beast, £3, 17*s*. by 6,	23	2	0
Profit on feeding lot 2d,	£1	19	3½

Being £8: 10: 1 per cent.

Lot 3d—Improvement of live weight, 49½ stones, equal 28 stones 4 lb. beef at 6*s*. per stone.	£8	9	8½
Increased value of carcass of 326 stones at 6*d*. per stone,	5	13	0
Increase of value from feeding,	£14	2	8½
Deduct cost of keep of each beast, £1: 18: 7½ by 6,	11	11	7½
Profit on feeding of lot 3d,	£2	11	1

Being £22: 1: 1 per cent.

Thus when Turnips alone were used, a profit of 22 per cent. was realized; when corn was used along with turnips, the profit was diminished to 8½ per cent; but when still more expensive food used, that is, corn and linseed cake, along with turnips and potatoes, a loss was sustained of no less than 12 and three tenths per cent.

Two pairs of the above cattle were selected and exhibited at the Looal Show in this county, and gained the first prizes as the best beasts bred in this county. One pair belonged to lot 1st, and the other pair had one beast from lot 1st, and another from lot 2d. They were sold on the ground for £20 a-piece. Their live and dead weights were respectively as follows:—No. 1, live weight 112 stones; dead weight of beef, 66 stones, 2 lb.; tallow, 8 stones 10 lb.; hide, 5 stones 11 lb.; other offals, 32st.5 lb. No. 2, (from lot 2d,) live weight 100 stones; dead weight of beef, 58 stones, 6 lb.; tallow, 7 stones, 7 lb.; hide, 4 stones 12 lb.; other offals, 29 stones 3 lb. No. 3, live weight 103 stones; dead eight of beef, 62 stones, 3 lb.; tallow, 9 stones; hide, 4 stones 12 lb.; other offals, 26 stones 13 lb. No. 4, live weight 109 stones; dead weight of beef 62 stones, 4 lb.; tallow 9 stones, 4 lb.; hide, 5 stones, 12 lb.; other offals, 31 stones, 8 lb.

We shall give another view of the subject by estimating the cost of producing a lb. of live weight.

Lot 1st cost 4.884 pence for every lb. of increased live weight.
Lot 2d cost 3.92 pence for every lb. of increased live weight.
Lot 3d cost 4.39 pence for every lb. of increased live weight.

We are not aware that any one has hither to attempted to assign the separate agency of each kind of food in the production of live weight, when more kinds than one are employed in the feeding of

cattle. Could this be done in a satisfactory manner, the question would at once be set at rest—Which food was the most profitable? We have already stated the cost of producing 1 lb. of live weight in each of the three lots of cattle in this experiment, where it appears that the joint agency of turnips and corn is the cheapest of the three. But we are not prepared to say that the like result will be uniformly obtained, because, although observing the improvement in live weight of a considerable number of cattle on a given quantity of turnips to be, on an average, an increase of 1 lb. of live weight for every 90 lb. of turnips, under good management, and with good cattle, yet we have seen cattle which did not improve 1 lb. of live weight for every 1000 lb. of turnips. By this experiment, lot 3d only increased a lb. of live weight for every 116 lb. of turnips; and it will be observed, from what cause we know not, that for the first thirty-two days of this experiment, this lot increased only 8 stones. Now, for forty-six days immediately preceding 23d November, 1834, the begining of the experiment, these same six cattle increased 48½ stones, or 113 lb. each beast; while, from a trial made for eight days, from 7th till 14th November, inclusive, they consumed 160.85 lb. each per day of common turnips (white globe,) which gave only 65.47 lb. of turnips to a lb. of increased live weight. But, avoiding lengthened details of other experiments, we will assume 90 lb. of turnips, as being equal to the production of 1 lb. of increased live weight, and from this datum, endeavor to ascertain the agency of each different kind of food employed in the feeding of lots 1st and 2d. We shall begin with lot 2d, and divide 6 times 15,226, the quantity of turnips consumed by this lot, by 90 and the quotient is 1015 lb. of live weight, as having been produced from the agency of turnips. Lot 2d, also, consumed 1440 lb. potatoes. We say that 40 lb. of potatoes will yield 1 lb. of increased live weight, the result will therefore be 1440 divided by 40, equal 36 lb. live weight as having been produced from the agency of potatoes; therefore 1015 add 36 equal 1051, and the remainder, 363 lb. as having been produced by the agency of corn, which make up 1414 lb. the total increase of live weight.

Lot 1st, by the same rule, stands thus:—

14,563 by 6, equal 87.378, divided by 90, equal 970 lb. live weight, by the agency of turnips.

480 by 6, equal 2880, divided by 40, equal 72 lb. of live weight, by the agency of potatoes.

531 by 6, equal 3186, divided by 8.77, equal 363 lb. of live weight, by the agency of corn.

389 by 6, equal 2334, divided by 21.81, equal 107 lb, of live weight by the agency of linseed cake.

The cost of producing a pound of increased live weight by the above data is—

90 lb. of turnips at 4d. per cwt., equal 3. 2142 pence.

40 lb. of potatoes at 1s. 6d. per cwt., equal 6.4285 pence.

8.77 lb. of corn at 3s. 3d. per bushel of 60 lb., equal 5.7 pence.

21.81 lb. of linseed cake at ¾d, per lb., equal 16.3575 pence.

Although we have assumed, in the above calculations, that 40 lb. of potatoes are equal to 90 lb. of turnips in the production of live weight, we are far from believing that proportion correct in point of fact. On the contrary, we should say, that 90 lb. of turnips are fully equal to 70 lb. of potatoes, and that the latter is perhaps the most expensive food usually given to cattle; and certainly, so long as potatoes

fetch 1s. 6d. per cwt. in the market, cattle on that will soon, to use a familiar phrase, "eat off their own heads." When any other food than turnips is desired for feeding cattle, we would recommend bruised beans, as being the most efficient and least expensive, on this account, we would prefer bruised beans alone to distillery offal. As regards linseed cake, or even potatoes, they are not to be compared to beans. In confirmation of this opinion, we may be permitted to state shortly the improvement made by three cattle last season, 1835–6, of the same age and sort, indeed own brothers, to three of the cattle in lot 1st of our experiment. They were fed on white turnips until 27th January, and after that date on Swedish; and, as we meant then to compete for the prize given for the *best beasts* bred in the county, we allowed them from 10th December 3½ lb. of oats and beans, and 3½ lb. of hay each per day. And, in order that a comparison may be made with the lot 1st of our experiment, we will state the improvement in live weight as near the same period as the dates of weighing will admit. The live weight of the three cattle on the 25th November, was 273 stones, and on the 31st March 338 stones, being an increase of 65 stones, or 21 and two third stones each, in 127 days; while by our experiment, lot 1st, in 119 days gained only 18 stones each, being a difference of 3 and two third stones in favor of last season. A pair this season also gained the prize as the best beasts bred in the county, against the others which had been fed on as much linseed cake as they could eat. Our pair of two years' old were sold, 16th May, 1836, for £55, 10s. We were at very great pains in the keeping of our two-years old cattle this season, having cut all the turnips for them, white as well as Swedish. We have always been in the habit of cutting the Swedish turnips, but never till this season did we cut the white also. In conclusion, on this part of our subject, we give it as our opinion, that whoever feeds cattle on turnips alone will have no reason, on the score of profit, to regret their not having employed more expensive auxiliaries to hasten the fattening process. This opinion has not been rashly adopted, but has been confirmed by a more extended and varied experience in the feeding of cattle than has fallen to the lot of most men.

That cattle consume food something nearly in proportion to their weights, we have very little doubt, provided they have previously been fed in the same manner, and are nearly alike in condition. Age, sex, and kind, have little influence in this respect, as the quantity of food consumed depends much on the length of time the beast has been fed, and on the degree of maturity at which the animal has arrived—hence the great difficulty of selecting cattle fit for experimenting upon. To explain our meaning by an example, we would say that two cattle of the same weight, and which had been previously kept for a considerable time on similar food, would consume about the same quantity. But, on the contrary, should two beasts of same weights be taken, the one fat and the other lean, the lean beast would eat twice or perhaps thrice as many turnips as the fat one—more especially, if the fat one had been for some time previously fed on the same food, as cattle eat gradually less food until they arrive at maturity, when they become stationary in their appetite. We have had great experience in feeding stock, and have conducted numbers of experiments on that subject with all possible care, both in weighing the cattle alive, and the whole food administered to them, and in every experiment we made, we discovered something new. But we have seen enough

to convince us that were the art of feeding better understood, a great deal more beef and mutton might be produced from the same quantity of food than is generally done.

We had no turnips at the time we were conducting the foregoing experiments, 5 queys of the same age and sort as the 18 stots, also 20 hree-year old stots, such as are bred on the Perthshire braes, in one court, and 14 Fife stots in another court. Five of an average size and weight, from each of the lots of Perthshire and Fife stots, were selected, and their live weights ascertained, and the turnips consumed by them weighed. They were weighed on 25th December, and the quantities of turnips consumed were ascertained from an average of the weeks previous and subsequent to that day. The result was as follows:—For every stone they were of live weight, the cattle consumed of Swedish turnips each day, the Perteshire stots 1.861 lb.; the Fife ditto 1.781 lb.; the two-year old queys 1.8881 lb.; lot 3d of our experiment, fed on turnips alone, 1. 948 lb.; lot 2d of our experiment, assuming the value of the food other than turnip, as stated in the previous part of this paper, 2.3; lot 1st of our experiment, under the same condition as lot 2d, 2.07. We must not be understood as presenting the above ratio of weight of beasts to weight of turnips as uniform. On the contrary, the ratio varies according to condition and food; we took the ratio at the end of December as a medium period. These same cattle, in the beginning of November previous, when on common white turnips, consumed them in the following ratio:—The Perthshire stots 2.7 lb.; the Fife stots 2.61. Lot 1st of our experiment when on turnips alone, before the experiment, 2.28; lot 2d under the same conditions, 2.8; and lot 3d under the same conditions 2.772. No note was taken of the white turnips consumed by the queys. It is not uncommon for a lean beast to consume more than a fourth part of his own weight of food every day, while a very fat one will not consume one-tenth. We kept two of the cattle of lot 3d until the end of December, 1835, when their live weights were increased to nearly double, and they then only consumed 1.5 lb. of turnips for each stone of live weight.

We shall conclude by relating a singular fact, which is in some degree connected with this subject: sheep on turnips will consume nearly in proportion to cattle, weight for weight, that is, 10 sheep 14 lb. per quarter, will eat nearly the same quantity of turnips as an ox of 40 stones; but turn the ox to grass, and six sheep will be found to consume an equal quantity. This great difference may perhaps be accounted for by the practice of sheep cropping the grass much closer and oftener than cattle, and which of course prevents its growing so rapidly with them as with cattle.

Note.—[Mr. Stephenson, of date 22d May, 1837, writes thus:—"In the last number of the Transactions, I observe from Mr. Boswell's Report, on Feeding Cattle, a remarkable coincidence of what is stated by me Mr. Boswell has given the live weight of his cattle, and the quantity of food consumed by them, and from these you will find the following results. In the cattle at Kingcausia, 94.841 lb. of yellow turnip produced 1 lb. of increased live weight in the hemmels, and 126.204 lb. in the byres; and every stone of live weight consumed 1.411 lb. of turnips in hemmels, and 1,383 lb. in byres. In the cattle at Balmuto, 96 lb. of turnips and potatoes produced 1 lb. of increased live weight in the hemmels, and 112.678 lb. in the byres.

And every stone of live weight consumed 1.325 lb. of turnips in the hemmels, and 1.362 lb. in the byres. These results arise from taking the average weight of cattle at the middle date, anp the average weight of turnips consumed each day."—*Editor Farmers' Register.*

The identity of the French Manure called "Animalized Charcoal" with a preparation of human excrements.

[FROM THE FARMERS' REGISTER.]

It was not a little singular, that while the article on the filth of towns, and means of converting it to manure, in the last No. was passing through the press, that we received from D. K. Minor, Esq, editor of the New-York Farmer, a letter of inquiry on the same general subject, and stating his design of saving and converting to manure, the immense amount of fœcal matters, which are produced, and serve merely as an enormous nuisance, in the city of New-York. Mr. Minor in conjunction with a French gentleman, who is acquainted with Payne's method of preserving and utilizing these substances, is preparing for the execution of his plan; and every friend to the agricultural and general interests of the country must heartily wish success to his public spirited and most important undertaking.

In answer to Mr. Minor's inquiries we forthwith sent the sheets of the publication then in progress, expressing our views on the subject—large extracts of which he has re-published in the New-York Farmer, as well as other articles on the preparation of "*poudrette*" and "*urate*," which have been copied in the preceeding pages. It is hoped that attention is now strongly attracted to this heretofore neglected subject, and, whatever may be the methods and means adopted for attaining the end that the main objects of benefitting health, and aiding fertilization, will be successfully and profitably reached.

In addition to all that we furnished on this subject, in the last No. and communicated to Mr. Minor, and to the information which he has derived from other sources, we have re-published on the last page, some articles from the last London Farmers' Magazine, (of June, 1837,) which speak of the qualities and value of Lance's "animalized charcoal;" and it appears from another much longer article, (of no worth in other respects,) from the same eulogist of the manure, that the compound is similar to the "animalized charcoal," manufactured at Copenhagen, and in France—and that human excrements form the basis, and principal fertilizing material of all. An account of the effects and value of this new manure, "animalized charcoal," from an English periodical, was given to our readers. It is, doubtless, this same "animalized carbon," which is described as Payne's and Buran's manure. Some mystery, and perhaps some quackery, on the part of the manufactures, of the manure, was evident in the earlier accounts; as the discoverers wished at first to pass off their "animalized carbon" as the refuse or offal product of the sugar refineries —a far more costly article, and which was known to bea very rich manure—just as it now seems that Mr. Lance wishes to have his manure rated as pounded bones. But however the manufac turers and salesmen might desire to conceal the nature of the materials they used, and to have them believed to be such as are more costly and less nauseous and offensive—it is very different with the

public; and the discovery of the material used for the preparation of the "animalized charcoal," is precisely that which gives the great and almost the only practical value to that manure. The genuine article composed principally of blood and sugar, rich as it might be, was too scarce and too costly to be of much benefit to agriculture; but the counterfeit article, which merely from its comparative cheapness was suspected to be "adulterated," promises to be highly valuable and important, because the materials are abundant, and their removal or consumption, in any way will be beneficial. Yet *cheap* as is this manure considered in England, (about 1*s.* 6*d.* sterling the bushel, and 35 shillings the ton at Copenhagen,) compared to the bones and refuse of sugar refineries, with which it is compared, that price, or the half of it, would make an enormous profit for the manufacturers of the compound manure, if prepared as Mr. Minor proposes—and so would the fourth of that price, if mild calcareous earth was the disinfecting and preserving ingredient used, according to the plan proposed in our last number.

If, then, we are right in supposing that the pretended "animalized charcoal" described in the two articles above referred to, is indeed simply human fœcal matter prepared for manure, it gives to those articles a new interest and value. As the first article above referred to is short, it is be republished here:

Animalized Carbon, a new Manure.

'This substance is of French origin, and its manufacture is secured by patent. It was discovered by a French chemist; but that it is a substance easily manufactured may be inferred from the fact of its being shipped free on board for 35*s.* per ton. Mr. Joseph Owen, of Copenhagen, acquired the knowledge of the manufacture form the patentee in France, and has since established a manufactory on his own account in Copenhagen. His traveller, a Danish gentleman, was the first to introduce this new manure to the notice of the Scottish agriculturists. We have not had an oportunity of seeing a sample of it, but it seems it has been tried last year by Mr. Dalgairns of Ingliston, and Mr. Inches of Cardean, who, we hope, will favor us with their opinion of its efficacy. We understand that the Danish gentleman has disposed of 250 tons of it in the counties of Forfar and Kincardine. Mr. Owen's card gives the following account of its nature, and the mode of using it.

"The chief excellency of this manure is, that it is powerful in its effects, occupies but little room, is easily separated, and conveniently used either by hand or drill; its effects are farther to ensure a rich crop, by gradually ameliorating the soil, and rendering fallowing unnecessary. For wheat, rye, buckwheat, barley, and similar descriptions of corn, about 8 cwt. 1 qr. 16 lbs. is used per acre: it may be either broadcast or drilled in before harrowing. For flax, hemp, beet, potatoes, &c. about 10½ cwt. per acre: and 12 cwt. 5 qrs. 10 lbs. per acre for artificial meadows, different sorts of cabbage, rape, culinary plants that are set in rows, a handful is put to each plant; for those which are transplanted, a child follows the planter and throws a very small handful of the manure into each hole, which is immediately covered over with earth; in several places for rape, it is scattered out in rows along the roots of the plant, which the plough covers by forming a new furrow.

On meadow land it must be spread out in December or January,

when the snow is not on the ground. Generally speaking, it is well to mix the manure with half its quantity of finely sifted earth; but there is no necessity for pursuing this method. On light and warm soils about 2 qrs. 22 lbs. less per acre is used than on cold or clay lands, where an extra 2 qrs. 22 lbs. are added to the quantity as beforehand directed to be used; it is in fact left to the farmer's judgment to make use of the above directions, according to local circumstances. What characterizes this manure most is, that it develops is effects so slowly and gradually, that it may be applied without danger in contact with the seed or roots of plants; in this it differs from a number of other manures which are less rich, but more heating. In Scotland it has been tried in 1834 on eight different soils, has been found nearly equal to bone dust for turnips, and has since been ordered in large quantities from the manufacturer. Mr. Owen, at Copenhagen. who delivers it free on board at 36s. per ton."—*Ed. Quar. Jour. Agr.*

Observations by Editor New-York Farmer.

Bone manure is held in high estimation both in Europe and this country, and is manufactured in large quantities, and sold at high prices, or 30 to 40 cents per bushel, with profit to the cultivator, but "*animalized carbon* a new manure," much in use and highly valued, as will be seen by the foregoing extract from the "Quarterly Journal of Agriculture," has not yet been introduced into the United States, nor are we familiar with its ingredients or preparation, yet we presume it to be valuable manure, not however superior to *Poudrette*, which is composed of at least *six* parts in seven of fœcal matter, and one part of a *vegetable* componnd which disinfects it of, or *allayes* the offensive odor, and makes it a dry substance, either in powder or in particles from a powder to a walnut, or hen's egg; or it may be made into any sized cakes, convenient for transportation, and afterwards ground, or pounded for use.

It is proper to remark here, that the gentlemen who is to direct the operations of the preparation in this city, familiar not only with the process of Mr. Payne, but also with every other process used in Europe, yet he does not adopt them, as he has a more speedy, and yet more mild, or less *deteriorating* process of preparation. The ingredients used are *entirely* vegetable, and serve to allay, or absorb, and not to *throw off*, the fertilizing gasses. The whole process is completed in 12 to 48 hours, according to the state of the atmosphere.

This manure will be sold at 25 cents a bushel; or put up in casks holding from 3 to 10 bushels and delivered on ship board for 30 cents per bushel, *warranted* to be prepared in the proportion of *six parts* urine and fœcal, and one part vegetable matter.

It will be prepared and put up under our own inspection, and branded with the brand of the Company. *Orders may be addressed to the Editors of the New-York Farmer.*

☞Why not have the same prepared and sold in Charleston, surely there is material enough?—*Pub. S. Ag.*

Poudrette.

[FROM THE NEW-ENGLAND FARMER.]

How we manage some things.

Mr. Editor,—Eating and drinking and some other common, or at least occasional employments, may in these days of refinement, be considered somewhat vulgar. Still eating and some other kinds of business which cannot be done by proxy, are, occasionally, very necessary; and, since you request communications, I will tell you a little about how we manage some things. We are not remarkably fond of suffocating stench, and poisonous effluvia, from putrid excrements; and as we wish to unite *profit* with comfort and cleanliness we take the following method.

We make our backhouse front towards the south. The seat is then placed on the north side, so as not to be acted upon directly by the rays of a hot summer's sun.

We occasionally place a few cart-loads of dirt near the north side of our backhouse.

The lower part of the covering of the north side of our backhouse from a little below the top of the seat downwards, is a horizontal door so hung that we can turn it up and down at our leisure, and thus have free access to the parts below the seat, and can easily remove all offensive and putrid matters from the place, and we can also supply fresh dirt when we please. Lime with us is scarce and dear—and according to Sir Humphrey Davy, though quicklime removes the bad smell from putrid manures, and forms with them a valuable compost, yet the compost formed with putrid matters and quicklime, is less powerful as a manure than the compost formed of the same putrid matters with dirt or soil instead of lime.

We allow no vault for the retention of putrefying feces and the production of poisonous gasses to be made under our backhouse, but, instead of this we turn up the horizontal back door before mentioned and throw a few shovel fulls of fresh and sweet dirt under the seat, and at suitable times we remove what has fallen under the seat, together with the dirt on which it fell.—This we throw into a heap and cover it well with some of the dirt which we had previously placed near by, and again we also throw fresh and sweet dirt under the seat.—Turn down the back door again, and all is sweet and pleasant about the backhouse, and this operation which occupies from two or three to six or eight minutes, we repeat as often as is necessary to prevent the bad smell which would otherwise be always arising from putrid excrements.

I said we like to unite *profit*, with comfort and cleanliness; and in this way with a little attention, and a little labor, we are delivered from these seeds of cholera, and yellow fever, and from the poisonous and suffocating fumes, which are frequently so annoying to those who are occasionally compelled to retire a while from public view. And with a family of six persons and a few loads of dirt we form from one to two cords (of 128 cubic feet each) of a very valuable compost manure, which if lightly ploughed in, produces powerful effects on corn or on English grain. If put into corn or cabbage hills, it ought to be slightly covered with dirt before dropping the seed. Put into the hills

and slightly covered with fine dirt before dropping the seed, I have seen nothing make cabbages grow like it.

It is of so volatile a nature that if spread and left on the top of the ground or on grass, we should expect a great part of its value would be lost.

If the droppings from the seat are allowed to remain a considerable time before they are removed and well buried, the compost will be liable to be infested with a kind of worms or maggots which sometimes attack the roots of the corn, cabbages, &c. Under these circumstances we have got rid of the worms and saved our plants by watering the cabbages with lime water, prepared by mixing six or eight quarts of quick lime with a barrel of water. But prevention is better than cure. And to prevent the attack of the worms, let the droppings from the seat be removed and well buried before the little flies and other foul feeders deposite their eggs in it. The eggs of the large flies soon turn to flies, and in warm weather they fly away in a few days, and are not the cause of the mischief of which we have been speaking.

Now by making compost as above described, and using it judiciously I should suppose that a family of six persons might not only have a great addition made to their cleanliness, their health, and their comfort, but might also have a yearly addition to their income of a barrel of flour. Surely this, in hard times, is a thing not to be despised. We certainly should not be willing to sell the compost we make in a year, in this way, for one barrel of flour, even if it have the most approved fancy brand which connoisseurs admire.

And the compost, if it contains a proper quantity of dirt is not a bad smelling manure after it has lain a few months.

Now then let us calculate a little. Massachusetts at this time, probably, contains six or seven hundred thousand inhabtants. Then let some course be taken, which would save to every six persons an additional barrel of flour yearly, and here would be a yearly saving of a hundred thousand barrels of flour for Massachussetts, and probably about 50,000 barrels for Connecticut. And 150,000 barrels of flour at $10 per barrel, would amount to *one million five hundred thousand dollars!!!* Surely this is an amount worth making some exertions for. At this rate the saving for 15,000,000 persons (the supposed population of these United States,) would be 2,500,000 barrels of flour, which at $10 per barrel would amount to *twenty-five millions of dollars in one year!!!*

But in cities this plan of making compost, with dirt cannot be conveniently carried into full effect for want of room.

In cities they may keep their backhouses sweet with lime; and may thus prepare a valuable manure.

Suppose then we follow the plan of making compost with dirt, (as before described) only in the country, and instead of 150,000 barrels of flour have only 100,000 barrels for Massachusetts and Connecticut, this at $10 per barrel would amount to *one million of dollars!* And this in hard times would be no very small amount. And if one million of dollars might be saved annually in Massachusetts and Connecticut; 16 or 17 millions of dollars might be annually saved in the whole of these United States by the same means!!

When the article in question is dropped promiscuously on the surface of the ground, besides being odious to the sight and the smell it is of so volatile a nature, that almost the whole of its fertilizing virtues are lost to the soil.

And now, Mr. Editor, if any person rather than to keep things about them clean and wholesome, are still determined to regale their olfactories with the poisonous fumes of putrid privies, at the cost of feeding upon musty wheat and rye, imported at great expense from Russia and Germany, I suppose that in this land of liberty we must allow them the privilege of doing so, although by so doing the nation is drained of a great amount of its gold and treasure. Yet we should greatly prefer seeing a practical attention given to the directions of that great teacher, who told his disciples to "*Let nothing be lost!*"

Yours, respectfully, H.

E. H. Conn. June 28th, 1837.

Facts and Observations respecting the Grain Worm and the preparation of Seed Wheat.

[FROM THE MAINE FARMER.]

MR. HOLMES,—Every thing that I can communicate on the subject of wheat, that you may think important, I will take the liberty to do through the columns of your useful paper. I hail the day when your paper was established as one all important to the agriculture of Maine, and I am in hopes that the balance in regard to bread-stuffs here, will be on the other side of the ledger in a few years. When I look upon what the State Legislature has done, I think I have reason to expect better days, not only for bread, but for every thing else.

A writer in the Farmer thinks that he has preserved his wheat from the ravages of the grain worm, by thoroughly cleansing the seed by means of a sieve made for the purpose, and sifting about a pint at a time. Another writer is of opinion that he saved his wheat by pounding a bushel of unslacked lime and sowing it on an acre. Another writer says that his wheat was much eaten, and he cut it and got it in green, and the heat of his wheat hatched the fly in the fall, and thousands were to be seen in all directions, and on the roof of his barn; and that he observed the same fly on his dung heap in the spring.

I have sifted my seed wheat for a number of years, and washed it in a manner described by you in one of your numbers; limed it and let it lay in lime a day and a night before sowing, and it was not troubled with the grain worm during the last, nor in any former years, whilst my neighbors' wheat was much injured. I raised 150 bushels of good, clean, sound wheat, free from the grain worm. I sowed on it five or six bushels to the acre, of leached ashes, after it was up.

I am told that Mr. Philbrick, of this town, sowed two pieces last year, separated from each other by a three rod road—one was eaten, and the other was not. I was told that the same took place in Lewiston. I am told that James Curtis, Esq., of this town, purchased wheat to sow, of Mr. Armstrong, which had been some eaten in 1835 and sowed it, after thorough cleansing, and raised wheat in 1836, free from the worm.

Mr. Editor: What are we to learn by the above facts? I learn.

1st. That the grain worm, or the fly that causes the grain worm, does not ramble far enough in one year, to cross a three rod road, but is spread or communicated by manure.

2d. That it has been a number of years in coming from the South to this region.

3d. Cleanse your wheat and manure entirely, and you will have few or no grain worms.

4th. That the remedy to be used as a preventive, is just what we ought to use, if there was no grain worm in the world.

ELIJAH WOOD.

Winthrop, 1837.

On the Culture of the Onion; by Mr. Towers.

[FROM THE CANTERBURY (ENG.) JOURNAL.]

Season of planting.—In February or very early in March, a number of small onions of the variety called Spanish or Reading, should be collected, the bulbs not to exceed an inch and a half in diameter; those of one inch will do very well, but they ought to be round, flattish, perfectly formed, and not in a growing state. It must be remembered that each of the onions should produce two, three, or four new ones, and the calculation might be founded upon this probable return. The upper soil of the bed, if it be dry, should be sprinkled, and then beaten with the flat side of a spade to a firm and level surface; the angles of the squares to be nine inches apart. Some persons might prefer to stretch the line, and to plant row after row, the onions to stand in quincunx or alternate order, but whatever be the mode adopted, the surface should not be broken up, and an onion is to be placed on the soil, at every angle of the squares, or at an equal distance along the line, and firmly pressed down till it be half immersed. Care must be taken also to let the root be fixed straight, so as to send its fibres perpendicularly downwards; the growth of the plant will then from the first be quite upright, and the bulb will be fixed firmly in its place; whereas, if the bulb lie on one side, it is very liable to be displaced. Worms are troublesome visitors on these occasions; therefore, soot, air-slacked lime, or wood ashes should be dusted freely over the surface; the operator must also be on the alert to refix any bulb which may be disturbed.

If the weather be early dry and parching in March, water may be safely given by making holes, sloping diagonally, from the centre of the intervals towards the lines of bulbs, but to at least four inches below them, and in these, water may be freely poured. In frosty weather, of course, nothing of the kind will be attempted, but in dry warm seasons, too much water cannot be given to the under strata; the surface soil, on the contrary, should be as dry as possible.

Under favorable circumstances, growth will be rapidly established, and the gardener will have to observe many interesting and beautiful phenomena. Leaves will at first be developed, but these are not now the organs of nutrition to the parent bulb, from the coated layers of which they indeed proceed. A system of foliage is indeed vitally required, but its energy in the present instance, can be diverted from that course which nature ordains it to take. In this second year, the leaves are destined to nourish the progressing organs of fructification, and it will be observed that each bulb sooner or later, produces a flower stalk, with its umbel of flowers concealed within their spathe at the summit. As soon as this head at the point of the flower stalk, shall be distinctly seen, it must be pinched or cut off. Upon this operation depends the entire success of the plantation; for if the flowers develop, and the

seed vessels enlarge, the bulbs will have no successors. A second, perhaps a third, flower sheath may appear, and must be immediately obliterated; this done, the leaves become stronger, and their laborated juices are instantly diverted, and called in aid of those germs of young bulbs which lie in embryo, and would perish with the parent, were the seed bearing processes allowed to be carried to any considerable extent.

After the final excision of the flower stem, a singular change, or rather a new development, takes place in the bulb. From being soft and spongy, owing to the previous exhaustion of the layers, they begin to re-acquire solidity,—that is, they appear to acquire it, for the phenomena is in reality dependent upon the progressive, but almost secret, production of one or more new bulbs. Nothing can be more impressive than this mysterious development; its course can scarcely be traced. I do not dare to assert, that a practised eye, gifted with a peculiar quickness in discerning physiological mutations, may not mark and detect those which are wrought in the formation and the enlargement of the new onions; but I do say, that among above ninety plants which I obtained last summer, neither I myself, nor a youth who planted the old bulbs, could trace the progress of the new ones. I may be excused for quoting the passage which I wrote in my diary, because it may be considered more simply true to the then observed facts, than any thing I could now pen from recollection.

"As the leaves advanced, the bulbs became soft and exhausted; as flower heads arose, they were pinched off, and gradually new bulbs formed, two, three, and four to each, the old bulb and skin vanishing in a way not to be detected."

I admit I have adopted this mode of planting but once, and, therefore, may have been in some degree misled. A future experiment will perhaps lead to more correct observation. I hope, however, that numbers may be induced to inquire for themselves; they will assuredly be recompensed by a very excellent crop of good onions, of a medium size, either in June or July. Mine, of 1835, was retarded by the extreme drought and piercing nights of May, and I had not attended to the previous preparation of the bed. I have expressly selected the Spanish or Reading onion for this summer crop, because it is mild and pleasant in flavor, and may be grown to greater perfection at the season; the process is worthy of the variety, and the variety is adapted to the process. The summer onions do not keep very long, nor is the Spanish a long keeper at all; hence particularly improper for the full winter crop, which ought to be hardy and of higher flavor. I might have chosen the *Tripoli*, which produces the largest bulbs, so large, indeed, that Mr. Knight assured me he had grown several bulbs that weighed more than two pounds each, but it is very apt to decay. Many gardeners affect the variety termed the underground or *potato* onion; but the process I have described, furnished, I think, an excellent substitute for it, especially as the flavor of the Spanish is far more delicate than that of the underground bulb. I claim none of the merit of discovering the foregoing method of multiplying the bulbs; but am certain that if practised by any, it is known to very few persons, and my remarks will tend to diffuse the knowledge of it.

Seed Crop.—These fine large onions may be raised pure to their originals, by planting imported bulbs in a warm situation, exposed to the sun. The season might be the same as that of planting for a summer crop, and the soil a rich, mellow, sandy loam, well manured.

The foregoing process for bulbs is adapted to the culture of seeding onions, with this especial exception, that the flower heads must be encouraged, and each step supported by a stake, as it advances in height. I am inclined to believe that were the imported bulbs of the Tripoli, Spanish and Portuguese planted, one in a large pot of very rich soil, about the first week of January, protected under glass in a common garden pit or vinery, not in action, and finally transplanted, with the ball of fibres entire, when all danger from severe frost had ceased, a month would be gained, which, in the north, might be found of some consequence, as the seed would be matured by an August sun.

The Wheat Worm.

[FROM THE VERMONT CHRONICLE.]

MESSRS. RICHARDS & TRACY,—As I live in a part of Vermont that is not good for raising corn, I have turned my attention to wheat. For a number of years I have raised from 100 to 150 bushels a year; but for two years past it has been considerably injured by the grain fly.

I have perused the two late articles respecting this insect, with interest. I presume that few of our farmers know what this fly is. Although I have tried repeatedly to ascertain what fly it was, (some say one kind and some say another) I have not been able to ascertain till within a week.

I always supposed the egg or worm (I do not believe it undergoes any change from the time it is laid till it leaves the kernel, only it increases in size) was laid in the kernel and could not be discovered till some time after the blossoming of the wheat—but having examined my wheat carefully in the bloom, and before the heads fairly get out of the sheath, I can find worms in the heads plentifully wherever they work, whether in the bloom or just at the time the head makes its appearance. I find by examination, that the maggot first makes its appearance between the buds [i. e. the green husk that contains the embryo kernel] and stalk. Take hold of the buds and the stalk, and gently open them so that the eye may have a fair view of that part of the stock which was mostly covered by the buds, and you will discover the maggot, and sometimes a great number together, hardly discernable to the naked eye, and some of them in the act of making their way through the husk into the kernel. This led me to conclude that the fly must be very small to lay the egg in so small a place, as between the stalk and kernel. Having examined a number of times in the day, I happened to be in the field just about sunset, to my astonishment I found a host of small flies, about of the color of the maggot, (perhaps between a red and yellow,) busily engaged, going from one part of the head to another. Being so small, and their abdomen so slim, they would hang by their feet, and work themselves into the place described, to lay their nits. No one that has witnessed the operations of this fly, can have any doubt respecting it. I have showed them to my neighbors, and they were equally surprised with myself, but were fully convinced that this is the fly. It is not much larger than the maggot when it leaves the grain,—I should not think much more than half as large as the common musquito.

I have examined a number of times in the day since, but can find the flies at work on the grain only at sunset. I think they can only be found on the grain about that time. I presume they would never be noticed at any other hour, but go into your grain carefully, and if you can find any weeds or grass, shake them slightly with the hand, and the flies will start from their hiding places. But at sunset you can find them plenty on the wheat heads.

I have but two small pieces of wheat that I can find very many in, and those lie near a piece of stubble ground, where I had wheat last year that was badly injured. This stubble ground was put down to grass. It has invariably happened, that every year when I have had wheat near a piece that was stocked, and on which I raised wheat the year before, the worms have been fives times as numerous. I have had large pieces of wheat adjoining ground where I had wheat the year before, but the stubble being ploughed in, they have trouble me in such cases but little.

From these facts, it appears to me that if farmers would raise wheat on no ground but such as they would plough after the crop, so as to cover the stubble, (or if the ground could be thoroughly burnt over,) soon we should cease to be troubled with the worm.

I have but very little doubt that the maggot leaves the kernel, and lies on or very near the surface of the ground, till the time arrives next season for it to appear; so that when the ground is ploughed, it buries them so deep that few ever find their way out.

As to lime and ashes, I am making the trial. I hope that it may be useful. What effect it will have I cannot tell. Any effort that promises the least success, should be made.

A Farmer.

August 7, 1837.

We are greatly obliged to the author of the above. If he is correct, as we presume he is, in regard to the fly, the lime may probably be applied best a little earlier than has been recommended. The winter location of the insect is an important point, which we hope our correspondent will investigate. If he is right in this particular, the preventive measure that he suggests, is of immense importance.—*Eds. Chronicle.*

The Native American Silkworm.—New Plan for the Worms to wind the Cocoons.

[From the New-York Star.]

Mr. Editor:—Since the receipt of your paper yesterday, I received the Nantucket Inquirer of the 15th ult., in which Mr. Jenks asks us for further intelligence in relation to the article on the Silkworm, published in the Star of the 3d ult.—As the words, "six different plans for the worm to wind the cocoon,' were published verbatim as I expressed in conversation with you, the call seems to require some explanation on my part. I will give it briefly thus: "It is so many contrivances to accommodate the insect in its preparation for 'winding up,' or so many different contrivances on which, (not round, which) the larvæ may suspend and wind the cocoon. One of the plans may be described thus: nine laths ¼ inch thick, 1¼ inch wide,

and 40 inches long, placed on edge, horizontal, parallel to each other, and 1 inch apart in the clear, these are connected by lath, 11¼ inches long, fastened across the ends; the whole forming a grate of 9 bars 11¼ by 40 inches. Five of these grates, placed parallel to and above each other, ¼ of an inch apart in the clear, connected by a single nail at each corner, with laths 9¼ long, standing vertically on end, forms *one plan*, which is probably the best of the six, and in the opinion of some good judges, is superior to all other plans (not excepting the European plan of bushes and branches of trees,) for economy, both in the *space* which it occupied to accommodate an equal number of worms, and the *expense* of construction. The 46 laths required for its construction, are worth 6 cents, and can be made with the labor of one hour, worth 12 cts.—making in all 18 cents. The worms wind the cocoons between the bars and between the grates, when by removing the four vertical laths at the corners, the cocoons can be cleared out in a few minutes, certainly in less time, and in better condition, than the same number can be removed from among bushes and trees.

The native American Silkworm feeds on elder, which is its principal food, and from it, spins a cocoon of good silk, strong, soft and lustrous, although coarser than that of the Asiatic worm.—The smallest cocoon in my possession, from the native American worm, is 70 per cent. heavier than the heaviest of the Asiatic. A fair average of the native cocoons are nearly 300 per cent. heavier than the Asiatic. I weighed today a fair average of the native American cocoons with 4 different kinds of Asiatic, the weights show the quantity of silk without the crrysalis:

Native American Cocoon,	17 grains.
Asiatic large white Cocoon,	6½ "
" bright white Cocoon,	4 "
" Monti di Brianza, a pale yellow,	3 "
" Golden Yellow,	5 "

The ova of the two last named, were imported by Mr. Tinelli, the present year. They are much cultivated in Italy and Spain, and produce the finest silks in Europe. The Monti di Brianza is particularly famed for receiving and retaining the most beautiful dye. By the above, you will perceive that the native American furnishes 850 per cent. more silk, than the Golden Yellow Asiatic.

A description of the Native American Silkworm may enable Mr. Jenks to recognize an old familliar acquaintance, which he has often frightened from its resting place, with the exclamation, "Oh! what a beautiful butterfly," pronounced in a tone too loud and too harsh for such sensitive antennæ.

It ranks in Linne's System of Nature in the Animal Kingdom, class 5, insects, order iii. Lepidoptera, Genus, Phalæna. The moth or perfect insect is without proboscis, and therefore, cannot eat; it has antennæ, 2 pectinate and black, head white, eyes 2 black, thorax red, abdomen entirely surrounded with alternate red and white bands, wings 4, brownish gray, lighter in the male, interior of two upper wings red, with one large ocellate spot near each exterior, and two smaller and less distinct in the margin; from the anterior to the posterior is a band of 2 distinct white and red lines, between this band and the interior is a large white lunate macula, surrounded with red and black; the last described band and lunate macula, are the same in the lower wings; across the exterior and margin, is a band of four distinct lines, ashy gray, black, cream and ashy gray; lower wings

the same. The larvæ is greenish, without hair, except a few on two protuberances, and feeds mostly on elder. The ova is cream color clouded with a redish gum, with which they are fastened to the leaf or bark. The pupa or chrysalis is a dark brown, enclosed in a cocoon of strong, soft and lustrous silk. It is a native of the North American States, and is found in no other country. I have 11 of the cocoons in my possession, 4 of which I found on Manhaten Island, near Harlem, N. Y., and 7 in the forest of Bergen County, N. J.

I intend, this summer, to manufacture sewing silk from the Native American Cocoons, and hereby promise to seed Mr. Jenks one skein of it, provided he will "contrive" some better name than "*contrivance*," for the *plan* of laths described in this communication.

Yours, &c.

C. F. DURAT.

Jersey City, July 21, 1837.

Saw Dust for packing Plants.

[FROM THE MAINE FARMER.]

I have noticed in the agricultural papers, some accounts of the loss of a large number of Morus Multicaulis, imported from France during the past spring, occassioned by neglect or inefficiency in packing. I presume the material commonly used for preserving vitality of plants, is moss. The kind denominated *Sphagnum*, is the best for that purpose, as it retains moisture for a length of time, and is not liable to fermentation.

The moss however, besides that it is not always readily accessible, is, I believe, inferior to saw-dust in both the qalities adverted to. When mixed with earth in equal proportions, and with a proper allowance of water, it will be many months before it can become dry, when sucurely closed in a box. By the way, boxes should be used in preference to mats—in all cases at least in which plants are impatient of a removal; or when they are to be transmitted to a considerable distance.

Some years ago, I received a box of plants from the South, which were put up in the fall and sent to Charleston, to await the sailing of a packet. It lay there three months, and did not reach me until quite late in the spring; but on opening it, I found the contents in a fine *growing* condition.

About the first of this year, I put up two boxes in the same manner —one to be sent to Boston, the other to Columbus, in Ohio. On the twenty-third of May, the former was opened, and all the plants were in a state of perfect preservation; having laid undisturbed for nearly five months. In the other case, though the box was small, and almost as late in reaching its destination, yet the plants were in a condition equally good.

I have reason to believe that many of the losses sustained in the removal of trees and plants to a distance—and they are not few—are to be ascribed to the imperfect manner in which the packages are made. An accidental delay, or unexpected change of weather, may materially retard the operation of planting; and if such occurrences are not guarded against by the care of the nursery-man, disappointment must frequently be the lot of customers.

A HORTICULTURIST.

Culture of the Peach.

[FROM THE FARMER AND GARDENER.]

Wilmington, April 5th, 1837.

GENTLEMEN,—I have cut the enclosed article from the Hamilton Intelligencer, and believing it highly important to the public, request its publication in your paper. I believe it is from the pen of Judge Millikin, of Butler County, Ohio.

He is a practising physician of age, and much experience with regard to the subject on which he writes. I do not consider myself skilled in the science of horticulture, but from observation, have long known the existence of the facts, for which the writer gives us philosophical reasons in their support.

B. HINKSON.

Peach Trees.—I frequently hear complaints through the country, that it has become almost impossible to cultivate the Peach tree. It is likewise remarked, that the fruit does not possess the same rich flavor that it did some years ago. I believe it to be a fact from my own observation, that we have no longer the pleasure of eating that delicious fruit, with all the fine flavors that it possessed in former times. There must be some natural cause for this failure. The climate has not changed. The sun has not ceased to shine. Rains and snows descend as formerly. Why then does the Peach tree not live, flourish, and fructuate?

I have frequently heard it remarked, that the Peach tree would only do well in newly settled countries, where there was nothing but it and uncultivated fruits. The observation is correct in part, that it only does well in newly cultivated lands; but why the orchardist and farmer have not examined, or have not chemically inquired into the cause of the death of the tree and failure of its fruit, I know not. The only subject to investigate in this inquiry, is the situation the soil is in when the peach tree is thrifty and bears well, and the mode and manner of keeping the soil with the same constituent properties. We see that it is necessary that the sun should shine on the tree and fruit in order to give that flavor which we so much admire. If the tree is in the shade, we find that there is an excess of acid in the Peach which renders it unpalatable—abounding with a watery fluid. It therefore becomes necessary, that at least a part of the day's sun should shine on the tree and its fruits, to concentrate the fluids. Further, we find that there is but one kind of soil that the peach tree will live in, for the ordinary length of time they will live in *congenial soil*, that has been under cultivation any number of years, (say 20 or upwards) and that is a *reddish clay soil*, which holds a goodly portion of *iron* in solution. This fall I ate finely flavored peaches from trees that were more than twenty years old. The trees had been planted and raised in the above described soil. In all new cultivated lands, we know that there is going on continually a decomposition of vegetable matter, say from the leaves that have fallen from time immemorial, rotten timber, and the decaying of the root and stumps, &c. Our next inquiry will be, what effects are we to expect from this decomposition? One is, we know, that about old buildings and rubbish of all kinds, the earth is always saturated with *saltpetre* or *nitre*, held in solution (as both names are applied to the same article.) The earth being measurably

saturated with nitre, the tree is favored with a nitrous dew; for nitrous acid will abound where nitre is held in solution. There must, also, be what chemists call the "*hydrogen gas*," for they say that it has an active part to perform in the decomposing of vegetable substances, together with other gases. If it is a fact, (and I believe no one will deny it) that those gases are necessary to be in abundance, or that the atmosphere ought to be surcharged with them, for the preservation and active growth of the tree and its fruit, more than for any other fruit tree, all we have to do to have our trees preserved to longevity, and have as rich, delicious fruit, as formerly, is to generate those gases which appear so essential. This may be done in the following manner: When we have trees planted in a grassy soil, we ought to denude the root of the tree by taking off the top soil for some distance around the tree (say one yard) so deep as to destroy the root of the grass; fill that vacancy with leaves, rotten logs, chips, or tanner's bark. The latter, I think, will answer, though I would prefer the chips, or rotten wood, to any thing else, for they will not produce so much moisture as tan bark, and as the ground where grass grows is measurably deprived of its nitre, and is cold, the chips or rotten wood will generate nitre, warm the ground, destroy the gluten in the soil, and the earth from freezing, thereby preventing the trees being killed by the frosts of the hard winters. By doing this, you have the soil for your trees in nearly the same situation to nurture them, that the soil of new cleared land is in. When trees are young—recently planted, and no sward or grass around them—I am clearly of the opinion that the tan bark will answer all purposes; that by the time the tree grows to any size, the bark will be decomposed so as to furnish a sufficient quantity of nitre and gases to answer all purposes, for the benefit of the trees. I would advise a renewal of the chips, wood or bark, as often as necessary, to keep the roots warm in the winter, and to prevent the growth of grass, always putting it on over the preceding coat. I would also advise the disuse of the pruning knife, after the transplanting of the trees. I would prefer letting them grow as nature directs, for whenever the bark is broken, a gum exudes from it, impoverishes its juices, and the tree then begins to decay. To prevent worms and other insects from getting about the roots of the trees, sprinkle sulphur around the body on the ground, and cover it with a small quantity of earth, to prevent the wind from blowing it away. This should be done in the month of April. The bodies of the trees may likewise be painted with sweek milk and sulphur, which will effectually destroy all insects that wound the bark. When caterpillars are troublesome to your fruit trees, take a panfull of live coals, hold it under that part of the tree which they are upon, sprinkle sulphur or brimstone on the coals, and the fumes will entirely destroy them.

I have dropped a few hasty remarks—perhaps enough to induce some abler pen to do the subject justice. AGRICOLA.

On making Meadow Hay; by Patrick Miller, Esq., late of Dalswinton, Dumfries-shire.

[FROM THE TRANSACTIONS OF THE HIGHLAND SOCIETY.]

Making hay is universally allowed to be one of the most important branches of agricultural pursuits, but the principal on which it should be conducted is not at all understood on this side of Tweed.

In England, however, the operation is very differently performed, and with very different and more satisfactory results; for by their system, a great deal of time is saved at a critical period, and a far superior article of food for their animals is produced.

Besides the great and necessary despatch which is used in England, much skill is also employed to produce and maintain a requisite degree of heat or fermentation in the stack, when the hay is put up, in order to convert the juice of the herbage to a saccharine state, which is found to be both more palatable, and likewise more nutritious for all beastial that is fed upon it.

In Scotland, on the other hand, it would almost seem as if dilligence was employed to unnecessarily procrastinate the work, and subject it to the risk of unfavorable changes of the weather; and by the excessive bleaching and drying of the grass, which is so universally practised, it is deprived of the possibility of assuming the saccharine quality; and what sap is permitted to remain in it, is converted to starch, which is neither so agreeable nor flourishing for horses, as hay made upon the principle which I am anxious to recommend, and from whence arises, as is easily to be perceived, a greater waste of hay in Scotch than in English stables.

Having premised this much, I proceed to detail the practice which I have pursued for many a by-gone year on my farm, which, being on a limited scale, I shall therefore confine my description to the narrow compass of my own operations, but which, of course, easily admits of being extended to a larger field, as circumstances may require.

When the hay season arrives and the weather is favorable, and when I perceive, by the height of the column of mercury in the barometer, and likewise from the appearance of the skies, that there is a likelihood of its continuing so, I set a couple of mowers to work very early in the morning, each attended by a boy or girl about twelve or thirteen years of age, and, as soon as the men have made half a dozen cuts of the scythe, the two boys or girls take up the swath and shake it out as thin as possible on the ground where it grew, there to lie and wither till after breakfast.

On the return of the mowers from their breakfast, a stout active woman begins to turn with a rake, *in the direction of the sun*, the grass which was first shaken out, the men and the boys cutting down and shaking out in the same way as in the morning.

When the woman has finished turning the early cut grass, she immediately goes to the spot where she began, and shakes all out again as thin as she can, and when finished, she commences turning by large rakefulls where the mowers resumed their work after breakfast, and continues her task in the same manner as when she began in the morning, always turning as already said *in the direction of the sun*.

On the people returning to the field from their dinner, the two boys immediately begin to shake out that part of the second turned grass which had not been accomplished before going to dinner, and when that is finished, they commence turning what was last cut, and then shake it all out again.

At this period, the two mowers and the woman proceed to rake the first cut hay into what is called a wind-row, and one of the men commences with a pitchfork to put into cocks of about ten or 12 stones weight, and between five and six feet in height, *but on no account is a foot permitted to go upon it, for it cannot be put up too light*; neither is it to be roped, for if the weather is calm, a few hours after it is in the

cock, it will so compact itself, that it will require a very violent wind to overturn it.

Thus, the hay which was cut in the course of the day, will be, through this mode of treatment, sufficiently dried and secured by the evening against any change of weather which may occur in the course of the night, and it will stand exposure to the storm fully as well as the hay which is so sadly mismanaged by the improper system at present in use.

So far the process only relates to getting quit of the redundant sap in the herbage, but if the hay gets rain or any adventitious moisture, either in working or stacking, it must be carefully dried off before being put into the stack; or so brisk a fermentation will ensue, that combustion will infallibly take place.

The next part of the operation is stacking the hay, and this may take place, if the weather continues fine, on the second or third day after the last cock was put up.

In making this kind of hay, the great and important object is to get it to ferment or heat in the stack, for the purpose of making it evolve its saccharine quality, as in the malting of grain, and is effected as follows:

If a round stack is inteded, let a common sack be well crammed full of hay or straw, and placed erect on the foundation where the stack is to be reared, and then begin building all around it with the first cut cocks, intermixing now and then a few of those last put up, in order to promote the fermentation; and when the stack gets as high as the top of the bag, the worker pulls it straight upwards, and so continues working around and pulling it up till the stack is finished, and in this way a chimney is formed for the escape of the nascent gas.

Should a long stack be preferred, then a chimney must be brought out at the peak at each end, and one in the middle, by the same means, if a large mass of hay is put in the sack; and in conclusion, I recommend that these vents shall not be closed for a month, or while any perceptible fermentation is going on.

Brief Hints for Winter.

[FROM THE GENESSEE FARMER.]

Cattle and all domestic animals should commence the winter in good condition,

Do not undertake to winter more cattle than you have abundant means of providing for.

Let every farmer aim to have next spring, instead of thin, bony, slab-sided, shaggy cattle, fine, smooth, round and healthy ones, and to this end let him spare no pains; and

1st, let the cattle be *well fed.*

2d, let them be fed *regularly.*

3d, let them be properly *sheltered* from the pelting storm.

Proper food and regularity of feeding will save the flesh on the animals back and shelter will save the fodder.

All domestic animals in considerable numbers should be divided into parcels and separated from each other in order that the weaker may not suffer from the domination of the stronger, nor the diseased from the vigorous.

Farmers who have raised root crops, (and all good farmers have doubtless done so,) should cut them up and mix them with drier food, as meal, chopped hay, straw or cornstalks, and feed them to cattle and sheep.

Cow-houses and cattle stables, should be kept very clean and well littered. To allow animals to lie down in the filth, which is sometimes suffered to collect in stables, is perfectly insufferable. By using plenty of straw or litter, the consequent increase in the quantity of manure, will much more than repay the supposed waste of straw.

All stables should be properly ventilated.

Mixing food is generally better than feeding cattle on one substance alone.

Cattle will generally eat straw with as much readiness as hay, if it is salted copiously, which may be done by sprinkling brine over it.

A great saving is made by cutting not only straw and cornstalks, but hay also.

Sheep, as well as all other domestic animals, should have a constant supply of good water during winter. They should also be properly sheltered from the storm, for the great point in the secret of keeping them in good condition, is to keep them comfortable.

Apple Molasses. By Try and See.

[FROM THE GENESEE FARMER.]

Brother farmers, will you listen to me a few minutes, while I tell you how to provide yourself with a first rate article, and one of prime necessity. You are probably in something of a haste, though I hope you have your potatoes dug and safe in your cellar, for there are many things a farmer has to do to be ready for winter. It is just about election time also, and every farmer should manage so as to be able to drop in at the poll and give his vote for a good man and true; but do not do, as many will, make the privilege of voting an excuse for spending a whole day at the tavern, imbibing "wet damnation."

If you are a married man, as I hope you are, for no other one has consistent claim to the character of a good citizen, you know, or if you do not, your wife does, that it costs no trifling sum to provide sweetening for the family, while there is no possibility of living without it; and experience has fully shown me, that for many of the purposes of domestic cookery, Apple Molasses is far preferable to West India, while it is at the same time much cheaper.

I make little cider, my apples are worth more fed to my hogs than for cider; but I make a practice of selecting my best sweet apples, those that furnish the richest, heaviest liquor, and making a cheese from them, using the cider thus obtained for making apple or quince preserves, boiling down for molasses, and keeping two or three barrels for drink, or ultimate conversion into vinegar. When new from the press, and before fermentation commences, that which I intend for boiling is brought to the house, and boiled in brass to the proper consistence; taking care not to burn it, as that gives the molasses a disagreeable flavor, and taking off the scum that rises during the process. The quantity to be boiled, or the number of barrels of cider required to make one of molasses, will depend greatly on the kind of apples used, and the richness of the new liquor. Four, or four and a half, are

generally sufficient, but when care is not used in making the selection of apples, five barrels may sometimes be necessary; but let it take more or less, enough must be used to make the molasses, when cold, as thick as the best West-India. When boiled sufficiently, it should be turned into vessels to cool, and from them transferred to a new sweet barrel, put into a cool cellar, where it will keep without trouble, and be ready for use at all times.

Molasses made in this way will be pure, and possess a vinuous or rather brandied flavor, which makes it far superior to the West-India for mince, apple or tart pies, though where the apples used are very sour, a small quantity of imported molasses may be advantageously used. It is also excellent for making beer in the summer, giving it a briskness and flavor which common molasses will not; in short, there are but few uses to which molasses is applied, in which it will not be found equal or superior to the other. Its cheapness should also be a decided recommendation with the farmer. The cider from which I manufacture my molasses, is worth at the press a dollar a barrel, and it is worth a dollar to reduce it to molasses, thus making the cost of a barrel of molasses, allowing four and a half barrels of cider to be used, four dollars and fifty cents. The price of common molasses will average about fifty cents a gallon, or sixteen dollars a barrel, making a saving to the farmer in the use of apple molasses, of about ten dollars per barrel.

A way to grow Early Potatoes; by Mancuniensis.

[FROM THE FARMER AND GARDENER.]

On walking out the other after noon, in company with some other friends, we were caught in a thunderstorm, and obliged to take shelter in a farm-house, the owner of which was known to one of the party. —During the storm, the conversation turned upon gardening, and our host gave us a plan for raising new potatoes, which I send you. It may appear strange, but, as he says, he has tried it, and found it to answer very well. At all events, I think it worthy of consideration and a trial. I give his own words, so far as my recollection serves;

"I was getting up my potatoes one year, in that field below the house, when the thought struck me, that by planting the smallest of them again, immediately, they would grow, and I should have new potatoes very early. I resolved to try the scheme. I had no hot-house or greenhouse, and was therefore to hit on a plan for keeping off the frost, which I did as follows. I chose a part of the field in which I was working, and made trenches along the top and the sides to keep it dry, I then covered it a few inches deep with litter, and put on a few inches of soil, and planted the potatoes, covering them again with soil. In order to keep the earth from falling down and smothering them, when they began to shoot, I stuck sticks and brush wood over the last layer of soil, and put on a quantity of litter, covering the whole with soil. One of my neighbors who saw me, was surprised, and said he was sure I should have nothing in the end, but I told him to come again on new year's day, and we should see. We did so, and we opened the bed and found new potatoes about the size of a marble; I then told him I would leave it until the 6th of March. I did so, and on opening it again, the new potatoes were as large as an

egg, exceedingly well tasted, and quite mealy. I showed some to the gardeners in the neighborhood, who would scarcely believe me, when I told them how I had grown them."

The situation in which they were grown, and which I myself saw, was on the north side of a hill, in the northern part of Lancashire, not in the warmest situation in the world, as you may imagine.

The idea of growing potatoes in the manner above stated, is good but my informant's mode is, I think, capable of improvement. If instead of the side of a field, an old hot-bed were used, and hoops placed so as to prevent the soil from falling down and pressing down on the young shoots, which would not grow very high, as potatoes when deprived of light do not grow so much above-ground as they do naturally, I think early potatoes might be raised without any expense. I intend to try it, at all events, and hope some of your readers will do so likewise.

Product of the Ruta Baga.

[FROM THE OHIO REVIEW.]

Having seen much published upon the subject of raising Ruta Baga, all of which has fell short of the crop I took last fall from a small piece of land, I am induced to give, not only the amount, but the manner of cultivating. To give the amount alone, of any particular crop, without the manner of cultivating, is no benefit to any one.

I had a piece of dry sandy land facing the south, which I wished to prepare for a fruit garden; and making more rich and level than I could do by ploughing. I therefore covered the ground about an inch thick with manure; and with a spade, dug and turned in the whole, to the full depth of the spade; taking care that each load was covered as soon as possible, after spreading to prevent loss by evaporation. This was done, or finished the fifth of June. I then waited until I discovered indications of rain, which I think was on the tenth of the same month, when I immediately took a hand with me, and commenced raking the ground with an iron tooth rake. I next took a large rake made of three inch scantling, with five teeth, fifteen inches apart, and having a man to hold, drew it across the ground, the direction which I wished to have the rows to run, making five marks. After that, we placed one outside tooth, in one outside mark, making four marks, until the whole was completed. I then dropped the seed quite thick in every row except the last eight, where I then skipped every other row, leaving them thirty inches apart, instead of fifteen. They came up in a very few days. I then took of gypsum, one part of ashes two parts, and having mixed the same sprinkled about a quart per rod on each row.

In five or six days, I thinned them out, so as to leave them from four to six inches apart. Ten days after, I hoed them again lightly, and gave them another dressing as before, which was all the labour bestowed upon them, until they were pulled.

From five roes of ground planted 15 inches apart, I gathered 61 bushels, measured in a 2 bushel measure, weighing 58 lbs. to the bushel, which would make 1952 bushels to the acre, or 113,216 lbs. equal to 50 tons 1216 lbs. From the ground where the rows were 30 inches apart, the yield was at the rate of 1424 bushels to the acre, the

turnips are larger, consequently not quite so heavy per bushel. One of the largest weighed 15 pounds. The above statement may appear incredible still it is true. I was at first loth to believe it myself, and went and remeasured my measure, examined my figures, and found that all was correct, and "that facts were stubborn things."

In submitttng this to the public, I am influenced, less from a desire to boast, than from a sincere wish to have others communicate the result of their experiments in agriculture, thereby benefiting the community at large.

Respectfully yours,

WM. WETMORE.

Wire Lightning Rods.

[FROM THE MAINE FARMER.]

We have often wondered why lightning rods as preservers of buildings from the effects of lightning, were not more often attached to buildings then they are. There can be no doubt, that if thoroughly and properly prepared, they will always prevent the lightning from doing damage. Perhaps one reason may be, the not fully understanding how to erect and secure them, and perhaps the expense may be another reason why we do not see them attached to buildings more frequently. The usual form of them, is in that of an iron rod, say half an inch or an inch diameter. This is generally put up so as to be above the top of the highest part of the building; the upper end sharpened to a point, and its lower end thrust into the ground. As it is not very easy to get a rod of this size sufficiently long in one piece, several are taken off, and merely put one upon another. and held in this position by wooden clamps. This is a dangerous mode. The clamps get rotten, or are moved out of the way by the winds or some other cause, and the rods either do not touch at all, or but slightly, and the continuous surface, necessary for conveying the electric fluid down, is interrupted, and may, and often does, lead to disastrous consequences.

The amount of surface which such a sized rod (half an inch in diameter) will protect, is said by electricians to be 40 feet square. As to this last point we know nothing from experience. We know however that buildings are often struck that have rods attached to them, either because the rod was improperly put up, or because they were not sufficiently large to convey the whole of the bolt that fell upon it. It is a fact which can be easily demonstrated, that the amount of electric fluid which any conductor will retain or suffer to pass, is directly as the amount of surface which it contains, and not its solid contents. Thus, a tin cylinder applied to an electric machine, will receive or retain, or suffer to pass through it as much electric fluid as will a solid cylinder of iron of the same diameter.

This fact may be of use to guide in erecting conductors for lightning.—A strip of tin or sheet iron, having the same amount of surface, will answer just as well as a solid rod of iron. It may not stand as permanently, or last as long; but while it does stand, and retain the amount of surface unimpaired, it would protect as much space as the solid rod. A rod one half an inch diameter, will give a fraction over an inch and a half of surface. Now a strip of sheet iron, three quar-

ters of an inch wide, will afford very nearly as much surface as the rod, and of course carry down as much fluid from the clouds, and at the same time be less expensive. The only objection is lack of durability. But the same protection can be effected by means of wires, which may be grouped together—may be found of sufficient length, and may be more conveniently erected and attached than the common rods. Suppose you take two wires, each a quanter of an inch diameter, the amount of surface will vary but little from that of the solid half inch rod, and we are inclined to think may be obtained cheaper, at any rate may be had in one piece, can be easily put up and fastened. Four such wires will give double the surface. An English writer recommends the following plan which he has adopted. He takes four wires, each one fifth of an inch diameter. These, says he, should be bound together by copper rings. This compound rod should extend several feet above the highest part of the buildings, and at the top each wire should branch out at an angle of 45 degrees, and end in a point. The rod should be fastened to the building by wooden clamps.

At two feet from the ground, it should incline outwards, and on entering the earth each wire should branch out again and terminate in a moist situation. In order to preserve the rods from oxidation or rusting, he recommends that before they enter the ground, they should pass through a cylinder of zinc.

We have no doubt that the above plan is preferable to the common one now in use. If the building is large, there should be more rods of them but in different parts.

The above writer goes so far as to suppose that an extensive multiplication of them, in fields, would materially affect the growth of the crop for the better, by producing a change in the state of the air. No one we presume can deny the position, for we are not aware that it has been tried. It is well known, however, that Electricity has a great influence on vegetation, and a more perfect knowledge of its laws in this respect is very desirable.

PART III.

MISCELLANEOUS INTELLIGENCE.

Beaufort Agricultural Society.—At a meeting of the Beaufort Agricultural Society, held in Beaufort, on the 20th inst., the following gentlemen were elected Officers of said Society.

WM. ELLIOTT, *President.*
JOHN M. VERDIER, } *Vice Presidents.*
WM. BARNWELL. }
H. W. RICHARDSON, *Corres'ding Secr'y.*
R. REYNOLDS, *Record'g. Sec'ry. & Treasurer.*

Committee on Arrangements.—Wm. Barnwell, Frederic G. Fraser, Henry M'Ree, Thomas Cuthbert, George P. Elliott.

Committee on Premiums.—Stobo R. Perry, Middleton Stuart. Frederic G. Fraser, Wm. Cuthbert, Albert M. Rhett.

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The Grape of America.—A correspondent of the Genesee Farmer says—"There are hundreds of acres of grape vines," says the N. York Morning Star, "near the Great Descent in Arkansas, loaded with the richest clusters of grapes of the same quality with those producing the valuable wines in Europe. These grapes (Vitis vinefera) are growing wild on the sands, and wasting their fragrance on the desert air." This, if true, is something new in Pomological History. Hitherto it has been supposed that this species was indigenous only to the old world; and although in the wilds of North America are found a number of distinct species of Vitis, not known in the old world, yet the *vinefera* was not to be found here till after it was introduced by Europeans. We should be glad to see this statement confirmed.

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Beech-tree—a non-conductor.—A thing that ought to be known.—The beech-tree, observes the Southern Religious Telegraph, is said to be a non-conductor of lightning. So notorious is this fact, that the Indians, whenever the sky wears the appearance of a thunder-storm, leave their pursuits and take refuge under the nearest beech-tree. In Tennessee the people consider it a complete protection. Dr. Becton, in a letter to Dr. Mitchell, states that the beech-tree is never known to be struck by atmosphoric electricity, while other trees are often shattered into splinters. May not a knowledge of this fact afford protection to many when exposed? And if such are the qualities of this tree, may it not be made useful as a protection to our dwellings?

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Mulberry Hedges.—To raise the Mulberry Hedge, Mr. De Labigaire directs as follows: "Round the field to be enclosed, dig up a ditch three feet wide and two feet deep; the longest roots of the young parts being cut off near the hairy fibres, must be planted about eighteen inches deep, at the distance of three or four inches [twelve we think near enough] from each other. After the ditch is filled up, every shoot must be cut at the height of two or three inches above the ground. Whether the plant is big or not, there is no matter, provided it is at least one year old. The time to plant these hedges is the beginning of April, [last of April or first of May here.] The second year it is necessary to cut again the shoots about six inches above the ground, in order to give more strength to the sprouting branches, which will form a pretty strong hedge the third year, and at last grow so thick as to be impassable by cattle. It may be twisted and intervowen a great deal easier than the hawthorn. If you choose to make a strong hedge, you may

plant it in double rows. For three years the young wood must be defended against cattle. No insect attacks the mulberry."

The subject of mulberry hedges is deserving of all attention from silkgrowers, and the experiment of making the home of the worm upon the hedge, is worthy of experiment, at least in the milder sections of our country.—*Cultivator.*

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Cline's Combined Plough.—The inventor of this implement made a trial of one of them at our place, a few days since, in the presence of several gentlemen, farmers and machinists, the result of which was highly satisfactory to all present. They are constructed with from two to five shares. The one used upon this occasion had two steel shares, and was worked by one horse, which power was sufficient to enable it to do its work with great ease and exactness. As the reader will suppose, it carried two furrows, which were laid with much nicety. From the peculiar mathematical propriety with which the proportions of the plough are arranged, there is no jostling nor inequality in the resistance, so that whether regard be had to the horse or the ploughman, the labor is lighter, much lighter, than with the common plough. Mr. Cline managed it most of the time with his finger and thumb resting on the reins placed on the cross-bar extending from handle to handle. The wood-work is got up pretty much upon the plan of a harrow with handles, is compact, strong, and competent to perform any work with proper force. The work performed at my place was ploughing in a small field of corn, and we were surprised to observe the closeness with which Mr. C. was enabled to approach the corn without injury. Indeed, so exactly does it do its work, that there is little left for the hoers to perform; for, in fact, that as well as turning up the ground is done by the implement itself. So satisfied are we of its immense superiority, that we have engaged one, with a view of working our corn. To us it appears, that his double shared implements are competent, with the propelling force, to do as much more work in any given time as any other plough we have ever seen, without increasing the labor to either man or beast.—*Balt. Far.*

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The Cultivator, or Horse Hoe.—Every farmer should be furnished with this useful implement. In most cases it is far preferable to a horse harrow or plough, as it thoroughly loosens the soil, and leaves it light and even. It loosens the soil better than a harrow, and as it loosens the soil and width required between the rows, and leaves it sufficiently even, it is much better than a plough. As the Cultivator may be expanded or contracted according to the space between the rows, it can be used to advantage in cultivating corn, potatoes, cucumbers, ruta baga, &c. But very few Cultivators were used in this part of the country before last year. A dozen or two were sold here last season, and we have heard several farmers that have used them speak of them in the hightest terms. One observed that his workmen thought that the Cultivator did one half the work; another said that he would give thirty dollars for one rather than be without; and another said that he would purchase a Cultivator every year rather than dispense with so valuable an implement. After a crop of early potatoes or peas is taken off, the ground may be loossend or ploughed with the Cultivator so as to prepare it for turnips. With only one good horse for a team, an acre may be prepared in about two hours.—When green sward is ploughed, and the turf turned under smooth and even, the soil may be worked with the Cultivator without disturbing the turf, which should remain at the bottom until it is sowed down to grass, and this is the best method of culture, as the turf forms a rich vegetable mould, and renders the soil far more productive, and the soil at top becomes rich to be turned under in turn. Let every farmer, before hoeing, examine this implement, and he will be unwilling to do without it, as it will be as good to him as a good hand.—*Yankee (Me.) Farmer.*

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Grubbing Machine.—Travelling lately on the banks of Connecticut river, in the vicinity of Hanover, I observed hundreds—and I believe thousands of rods, of strong substantial and durable fence, made of white pine stumps, extracted from the ground with their roots. Curiosity led me to inquire by what power and machinery the operation of extracting was performed. An obliging stranger showed me one of the machines, and explained the manner in which it was applied—and as I apprehend these machines may be used to great advantage in many parts of the United States where they have not been heard of, I will endeavor, as far as I can recollect, to describe the machine, and explain the manner of using it.

The machine consists of a very strong pair of wheels, say 18 feet diameter; the axis is about 15 or 16 inches diameter. Near to, and the inside of one of the wheels, a third well, something less than the others, is framed on the axis as a hub.

A large rope or hawser is fastened to the periphery of the small wheel, and coils upon it. To the end of this hawser are hitched four oxen—a large chain is made fast to the centre of the axis and round the stump. The oxen drawing upon the hawser, turn the small wheel and axis, while the two large wheels remain stationary, only supporting the operation. The stump when thus extracted is borne off, swinging under the axis, to the line where the fence is to be made.

It may be necessary to add, that where the stump is large and holds a strong grasp upon the earth, the most prominent top roots should be cut off 3 or 4 feet from the stump.

The fence is constructed by throwing the stumps into line, and stopping in here and there a root to secure the widest openings. To those acquainted with the durability of pine stumps, it is hardly necessary to observe that the fence constructed of them will remain sound for at least one generation.

The machine constructed as above and applied by four men and four oxen, will extract from 70 to 80 stumps per day. Its usefulness needs no comment. There is nothing visionary about it. The experiment has been tried upon a large scale, and many a farmer who heretofore dreaded the pine stump as an enemy which would survive himself and annoy his heirs, now swings his undisturbed scythe or cradle over the strong ground which his fallen foe once occupied.—*Centreville Times.*

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Franklinian Economy.—Aside from Franklin's discoveries in electricity and philosophy, a correspondent in the Washington Sun thus speaks of Dr. Franklin's discoveries in matters of domestic economy:

"To no native American is more honor due than to Dr. Franklin. His science, patriotism, industry, and morality, as well as his political sagacity, have been and are the subjects of general approbation; and, as common property, it is not necessary to dilate upon them. It is his investigating spirit of inquiry, as to whatever new his mind rested upon, and the beneficial results of his observations, that are now brought to view.

"Broom corn, now cultivated to so profitable an extent in this country, owes its cultivation to Franklin's acute mind. A lady in Philadelphia held an imported clothes whisk in her hand, and, whilst examining it as a novelty, he found a single grain still attached to the stalk; this he planted, and a large and increasing article of usefulness has been thus perpetuated in the U. States. A paragraph from a northern newspaper of 1836, has a corroborating proof of the value of this discovery: "The broom straw speculation bids fair to run as high this year as it did last. A week ago speculators were offering $50 an acre for the growing brush.'"

[The Yellow, or Golden Willow, which now flourishes in most parts of the Union, was introduced by the same friend to his country and mankind. In a wicker-work imported basket offered to his view, Dr. Franklin found some of the twigs were sprouting; he took them out and presented them to Mr. Norris, of Philadelphia, who succeeded in raising them very successfully, and to a great height.]

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Scraps for the Economical.—If you would avoid waste in your family, attend to the following rules, and do not despise them because they appear so unimportant:—"many a little makes a mickle."

When ivory handled knives turn yellow, rub them with nice sand paper or emery; it will take off spots, and restore whiteness.

Silk pocket handkerchiefs, and deep blue factory, will not fade, if dipped in salt water while new.

Spots in furniture may be easily cleaned by rubbing them with a flannel wet with the same thing that took out the color; if rum, wet the cloth with rum, &c.

Lamps will have less disagreeable smell if you dip the wick yarn in strong hot vinegar, and let it dry.

Clean a brass kettle before using it for cooking with salt and vinegar.

The oftener carpets are shaken the longer they wear; the dirt that collects under them grinds the thread.

If you wish to preserve fine teeth, always clean them thoroughly, after eating your last meal at night.

Linen rags should be carefully saved; they are useful in sickness; if dirty or worn, wash them and scrape them into lint.

Vials which have been used for medicine, should be put into cool ashes and water, boiled and suffered to cool before rinsed.

Cotton, wet with sweet oil and paregoric, relieves the ear-ache very soon.—*Mrs. Child.*

Winter products of a Devon Cow.—At our request, Abm. P. Holdrich, Esq., of Spencer-town, had an accurate memorandum kept of the butter made from a Devonshire cow, which calved late in autumn. The result was, that from the 10th December to the 18th January, including both days, there was made from her milk 56 pounds of well-worked butter, nearly equal to two pounds per day. The cow was fed with roots, hay, and buckwheat bran. Estimating it at 20 cents per pound, the butter made during the month, and in the depth of winter, was worth $11 20; and if we consider this the average product of 8 months in the year, the aggregate amount for that period would be $89 60. We need no better illustration than this, of the importance of keeping good animals, and of keeping them well.

Sugar from Indian Corn.—It is said that the Revolutionary heroes used to sweeten their switchel with corn stalk molasses, and perhaps their children may be benefited by a knowledge of the fact, that both sugar and molasses can still be obtained from that plant. How profitable the manufacture of it may be, we cannot say, as we believe no experiments have ever been tried to test the fact, at least in Maine. Some experiments were once tried in the south of France, in order to ascertain the quantity which could be obtained, and the following were the results:

1. The stalk of the corn contains little or no sugar previous to flowering.
2. At the time of flowering, a small quantity of sugar may be detected.
3. When the grain is still soft, the stalk contains about one part in a hundred of chrystallizable sugar.
4. When the grain is completely ripe, the stalk contains two parts in the hundred of sugar, and four parts in the hundred of rich and good tasted molasses.

The pomace may be given to cattle, or made into wrapping paper. It is not known how far the above calculation will agree with the plant in our climate. We shall probably not need this article to manufacture sugar from, so long as it can be obtained in large quantities from the maple, sugar beet, &c. But the fact may be important in one point of view. If the statements are correct, the stalks are more nourishing for cattle, if cut when they are ripe, than if cut earlier, and as they are cut for this purpose, a little judgment exercised in the business, founded on a knowledge of the properties, will make no small saving.—*Maine Farmer.*

R. M. Sherman's Banking Bill.—The Bill now before a Committee of the Legislature of Connecticut, for the greater security of monied institutions, is intended, as far as practicable, to render the banks of the State safe and useful.—There are five objects which it is designed to accomplish.

1. To render the paper currency as safe as gold and silver.
2. To make the stockholders safe.
3. To accommodate all classes of borrowers, as extensively as any provident business may require.
4. To secure to the bank just profits.
5. To guard against over-trading and extravant speculation by the aid of banks.

To accomplish these desirable ends, the bill provides for a competent number of commissioners, not exceeding one in each county, to one of whom the duties in regard to each bank, as specified in the act, shall be confided. It next provides, that after a certain day, no bank shall issue any bills as a currency, unless they are secured by a bond and mortgage delivered to and held by the commissioner; the mortgage to be in value double the amount of the bills secured. On receiving this security, the commissioner is to endorse on the back of each bill so secured, these words—"Secured by Mortgage. Attest A. B., Bank Commissioner."

Keep your Hoes sharp.—Very likely your grandfather never heard of such a thing as grinding a hoe; but no matter. try it for yourself. and see if a sharp hoe does not work as much easier as a sharp axe. You would think yourself poorly provided for mowing, without a rubstone or a rifle; and a file for sharpening a hoe, is as necessary in a field of corn, as the former implements are in the meadow.—*Gen. Far.*